

# COAL AGE

The Only National Paper Devoted to Coal Mining and Coal Marketing

C. E. LESHER, Editor

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## *A Substitute for President Harding's Proposal*

CLEVELAND is staging a two-ring show this week. One is the Eastern Ohio operators' party with Mr. Lewis, to which we refer elsewhere on this page. The other is a horse of another color. It may almost be described as the "dark horse," for it was but announced on Tuesday with all details officially withheld until Wednesday. It is a plan to settle the present suspension of mining. It is not a settlement for the issues of the strike. Briefly, it is this—mine owners and mine workers are to resume operation with the *status quo* of March 31, 1922—wage scales, check-off, everything. They are then to go home and forget the controversy and cool off for 30 days. By Oct. 31 they are to elect an advisory committee composed equally of operators and miners, which committee is to make detailed, deep and complete study and investigation into the coal industry. It finally will report its recommendations, not binding on any one, as to the best way to conclude future wage scales, whether by districts, states, groups of states or nationally. This committee is to give equal consideration to the competitive relationships of the operators and the necessity for full compensatory wages for the men. A lot of other things are suggested.

The essential thing is that the moot point of HOW is put aside. Mr. Lewis does not get his four-state conference, nor the operators get their district agreements. Which it is to be will be recommended by this committee. Since neither side is called on to concede the point, and since the resumption for the winter at the 1920-1922 wages has already been discounted in most fields, made certain in fact by the proposal of President Harding last month, there is not much left to argue about. It may be, as some thus early would think, but another string in John Lewis' bow, but since he has the bow, what matters another string? It is a plan parallel to that proposed by the President on July 10, with the difference that John Lewis will accept it.

## *Negotiating a Truce*

LAST February the United Mine Workers declared war on the American people. They said they would exert their full economic force to prevent the liquidation of their wages from the post-war peak. They have succeeded so far. In the face of economic conditions wholly opposed, contrary to every canon of sound industrial readjustment, the miners' union has stood off wage reductions, even consideration of wage readjustments, and when they go to work some time this Fall or this Winter, it will be for the most part at the wages they struck to maintain. This is not a concession in advance of the fact, but an actuality. It is a tribute to superior organization, unified command,

better generalship and more efficient use of the common type of munitions, propaganda—if you do not object to the use of the word.

A war is not over until someone surrenders. No one has surrendered so far. It is true that the principality that regards Cleveland as its capital and metropolitan center is treating with the union this week, but the bulk of the operators in that conference, the leaders at least, never were in the war. They had no quarrel with the union and have put no army in the field. The operators of Eastern Ohio have not capitulated to the union. Their course has been consistent from the start. They have been one of the neutral states in this strife. In the crucial test of 1921 that field suffered, by comparison, not at all from non-union competition. They could continue to pay the highest rates to their men and it would be no skin off their knuckles if the consumer had to pay them in accordance for coal.

Eastern Ohio in the last six months of 1921, when competition in the sale of coal was so keen that men ceased to be friends, operated at the rate of 52.6 per cent of full time. Her nearest union competitor, southern Ohio, managed to record 22.9 per cent in that same period. Pittsburgh all-rail mines run at 41.2 per cent. The non-union fields of southern West Virginia, with lower costs both by reason of better natural conditions and liquidated wages could register no better than from 49.8 for Pocahontas to 24.3 for New River. Is it any wonder that Eastern Ohio has not been in favor of fighting it out with the union? How can anyone call a fellow a quitter when he never started? So it cannot be heralded as a victory for John Lewis that he has lined up that group of operators.

Where John Lewis has scored a triumph has been in holding his forces intact through the summer and until the public necessity for coal has driven first the hard coal producers and then a substantial portion of the soft coal operators to offer a resumption of work on the old and highest scale, for the winter. The question of supply of fuel for homes, transportation and industry for this winter has long since become so acute that the President has virtually taken charge of the situation. He is after coal production for the people. He asks the contestants to forget their strife for a while and give us the needed coal, and urges the submission of the points at issue to the third party, an impartial tribunal.

Plainly enough the policy of the administration at Washington in both the coal and rail strikes is to establish the principle of arbitration in these major industrial disturbances. Nothing can be fairer. The inhabitants of the east bank of the Rhine, however, never crowded the hotels at the Hague in 1914 and came somewhat reluctantly to Versailles in 1919. John Lewis surveys his ranks and states that the only council table he will put his feet under is one of his own

choosing. So he calls in the few who have no quarrel with him and they bring some adherents and attrition of the operators' ranks begins.

Since March the various coal operators' local associations have been regularly offering to meet their men, through the regular union representatives, in district conferences. Time after time they have called for conferences, set dates and opened the boxes of cigars, but nobody from the union came to the meeting. John Lewis had told the men that the only way to prevent a reduction in wages, to forestall the otherwise inevitable loss of some of the gains of the war and post-war inflation was to stick together; that district settlements forshadowed less than district settlements and disruption of the union. He got the message over and no power of operator persuasion has been able to jar loose a single element of his membership. His ranks held.

Now, with coal stocks lowered to the point where cumulated demand insures full running time for all the mines and offers even the operators of the more sorely beset of the union operators a market for what they may be able to produce at such prices as will warrant any old wage scale, Mr. Lewis attempts to turn the flank of the enemy with some of the tactics he resisted for five months. Having successfully withstood the enticements of district settlements offering local enrichment to small groups of mine workers, he seeks to entice small groups of operators from their common policy of district settlements to participation in a national wage conference.

### *Congress Views a Hornet's Nest*

THROUGHOUT the week the office of the Federal Coal Distributor has been busy day and night. It already has been demonstrated that H. B. Spencer and his associates have a comprehensive grasp on the situation and are entirely capable of carrying out the very remarkable plan which Secretary Hoover has worked out—remarkable particularly in respect to putting responsibility outside of Washington. The trouble is they are being called upon to make bricks without straw. Just how much of a success they will be able to make of the job, in view of the flimsy authority to which the Federal Government can lay claim, is questionable. One thing is certain, the coal operators are on trial. They have been put on their honor but if they yield too generally to the temptation of accepting prices above the maximum agreed upon, it is believed that nothing then can prevent regulatory legislation. This is not an argument for fixing prices, but a conclusion. Just now Congress regards the strike as something of a hornets' nest. The administration has won little commendation for its efforts. Because of the danger of being stung, Congress will keep away from the hornets' nest until after the strike.

### *Two Hundred Thousand Dollars*

HIGH-SOUNDING resolutions of horror at the Herrin massacre, in which a score of non-union men were murdered after they had surrendered to a mob—presumably a union mob—and resolutions calling upon the state and national authorities to bring the culprits to swift justice are easy to pass and put in the mail. But what do they accomplish? It is well for the public to express its opinion on such matters, but,

unfortunately, the peculiar situation at Herrin and in the remainder of the solid-union south of Illinois makes it so difficult for state and government to enforce the authority of the law that the citizenry of the state and nation can better aid by lending assistance more concrete than words. Money is the answer.

In handling a situation such as that in Williamson County, where morals are no higher than they obviously are, one of the most powerful magnets to be used in search of the truth is cash offered to obtain evidence. State Attorney Edward Brundage, of Illinois, recognized that after his first visit to the troublous region. He offered \$1,000 cash for evidence that would result in conviction of the guilty. He obtained some evidence, but, apparently it is little enough. With a fund available two hundred times as large as that offered by Mr. Brundage a tremendous impulse should be given to the swift and sure apprehension of the men who instigated, abetted and executed the Herrin horror. Two hundred thousand dollars should encourage enough willing but fearful citizens of Williamson County to yield up facts at the risk of their lives so that that "bloody" section of the State of Illinois could be purged to a point where honest people there could once more tell the truth and law and order prevail.

### *Interminable Roadways*

SOME are disposed to think that only in big mines are long roadways and a haphazard system of development to be deprecated. After all most of what has been said of these larger producers by Wilcox and Pleschner is true also of small drift mines.

When even a 1,000-ton mine is laid out with only a main entry and several interminable room entries there is bound to be excessive air resistance or excessive splitting and, what is as bad, much loss of air from leakage and much expense for maintaining stoppings and roadways. Development also is sure to be slow and must be run double shift.

Many small mines, especially in low coal, fail to be productive because of lost air, excessive road upkeep, frequent stoppings, repairs to brattices, too many poor communications, making supervision and management difficult; attempt to maintain several expensive drainage ways and too frequent night work on headings. Where a room heading supplies a full load for a locomotive the length of the heading may be of little consequence. The locomotive has to go as far whether the work is in panels or goes on indefinitely or to the crop. But where the locomotive has to haul from two headings to obtain a full trip it is a distinct disadvantage to have the headings long, for much time is wasted in running so far under partial load.

Unfortunately an elaborate layout serves often only to cause delay in the first stages of development. At that time one main entry (including, of course, a return airway) is all that is needed. The room entries are short, the resistance to the air is light, the leakage through the stoppings is negligible and the expensive layout necessary to guard the future is regarded as extravagant. But after awhile the simple method, adequate enough for early operation, becomes wholly unsuited to later conditions. Nowhere is coal enough removed, and a squeeze is likely to occur. With all the robbed portions of the mine cleaned out and entirely caved the newer parts are safe and may be relied on.



# Methods and Practices of E. E. White Coal Co. At Stotesbury, W. Va.

BY ALPHONSE F. BROSKY\*  
Pittsburgh, Pa.

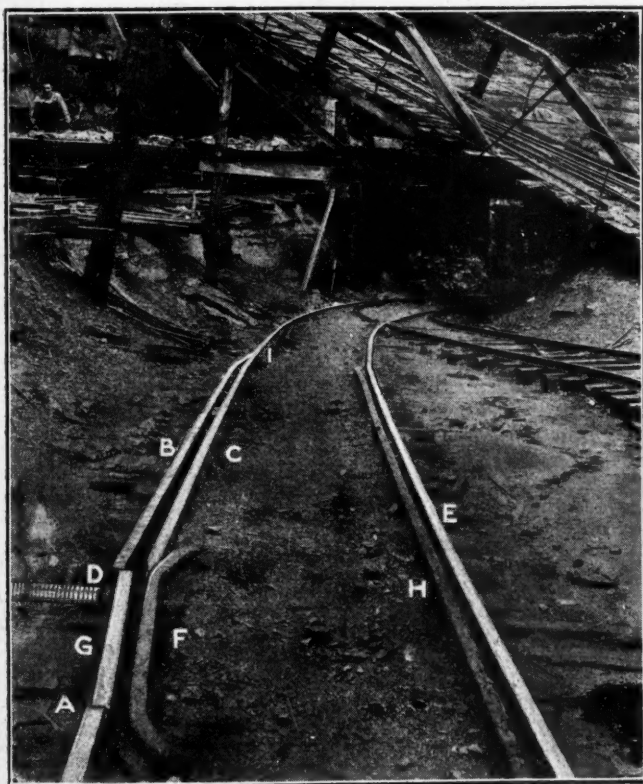


**Track Device Tests Automatically Presence of Loose Wheels—Rebuild Locomotives Periodically According to Determined Schedule—Foundry Established at Mine—Tire Removals Facilitated—Larry Adapted to Steep Hillside Dump**

**A** FREQUENT source of accident around coal mines is wheels that become loose and out of gage by the loss or shearing of retaining pins or the loosening of bolts. No assurance can be felt that wheels will not become loose even when they are of the tight-wheel type, in which, of course, the axle revolves with the wheel. Whether the wheels have plain or roller bearings they are apt to become loose and the so-called "loose wheel" that revolves on the axle is prone also to loosen in the same undesirable sense. All wheels therefore need inspection if derailments are to be avoided.

\*Bituminous editor, *Coal Age*.

NOTE—Frontispiece shows tipple of E. E. White Coal Co.



**DETECTOR FOR LOOSE WHEELS AT STOTESBURY MINE**

Placed on the track by which empty cars leave the tipple, this device tests every car as often as it is dumped. By the operation of the spring rail G one wheel of every axle on which the wheels have become loose is directed so that it travels on the roughened rail, B, causing the car to which it is attached to bump noisily and attract the attention of nearby workmen.

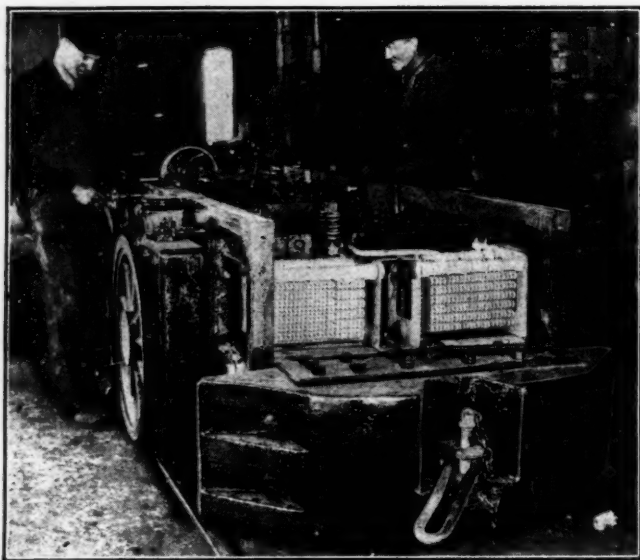
At many mining plants the mine cars are periodically inspected, particular attention being paid to the condition of the wheels and axles. However, as such cars are heavy and as the inspection usually is made with the cars on the track, judgment is left to the eye alone and not, as it should be, to some mechanical test. Consequently a faulty wheel often goes unnoticed. At other places the man who attends to the lubrication of the wheels or axles is instructed to watch for any defects, but, unfortunately, it is much easier to bend over slightly and fill up the oil reservoirs than to get down on one's knees and crawl around in the effort to detect a faulty wheel or axle.

For this reason inspection is often omitted or else made in such a haphazard manner that it might just as well be dispensed with. In still other cases inspections are never made and defects are corrected only when they assume a dangerous form and are readily discernible by the eye. A greater tractive effort of the locomotive is necessary when the wheels become loose. This deficiency inevitably makes itself felt in higher power bills.

At the Stotesbury mine of the E. E. White Coal Co., at Stotesbury, W. Va., an ingenious track device has been designed which will make evident such wheels as have too much play and will sound an alarm when they are found. With this arrangement no one is required to give up his time to inspection, as the action of the device is automatic and, what is still more to its advantage, each car is inspected every time it passes over the empty track at the tipple. Unlike a personal inspection it is foolproof, for every car that passes over the device is made to sound an alarm if the wheels under test do not continue within the limits of the track gage. One of the several men who work on or about the tipple will hear the alarm and run the car without delay on the track leading to the shop.

With the following description and the illustration shown it will be possible for the blacksmith at almost any mine to fabricate the rails of which the device is composed. As may be seen by referring to the illustration, the entire length of the detecting track is no greater than that of the standard rail—that is, about 30 ft.

It is inserted on the empty or return track leading from the tipple, so that the cars pass through it by



#### REBUILDING SIX-TON LOCOMOTIVE IN MINE SHOPS

Each locomotive before leaving the shops is rebuilt "like new." The grids in the foreground are not new but have been rebuilt. At least three men are working on the motors at all times. The locomotives consequently do not develop small defects such as too often delay trips, waste time from the face to the railroad track and lower railroad rating.

gravity. To the left of the illustration of this device will be seen the 4-ft. latch rail, *G*, fishplated loosely at one end, *A*, so that it may be thrown in line with either of the two rails, *B* or *C*, on the left. The tension spring, *D*, on the forward end of the latch holds it in line with the outer rail, *B*.

Imagine a standard pair of wheels, properly attached to an axle and truly in gage, passing through this track. Rail *C*, is in gage with rail *E*, but the guide rail, *F*, attached to the latch rail, *G*, will not permit the passage of a left-hand wheel over rail *C* until the latch is swept from the normal position as shown to one in which rail *G* is in line with rail *C*. This is accomplished against the tension of the spring at *D*.

The right-hand wheel is pulled by the guide rail *F* (the gage of which with respect to *H* increases) toward rail *H* until the flange of the wheel comes into contact with it. In this position the flanges of the wheels on either side rub the two guide rails *F* and *H*, and only a small width of the tread on each wheel rides upon the rails *G* and *E*. But as the gage between *F* and *H* increases the latch rail and its guide are pulled into gage against the tension of the spring until the latch lines up with *C*, thus permitting the left wheel to pass over it and out to the point where the trip is made up.

If one of the wheels, being loose, is free to increase the gage between the wheels when passing through this track, the latch will not be thrown, and the wheels will ride upon rails *B* and *E* instead of *C* and *E*. On the ball of rail *B* are welded a number of vertical offsets or humps about one-half inch high. These make the car bump up and down when a wheel passes over them, and this is a signal to the men at the tippie that a defective car is passing over the track. At point *I* is located a small latch loosely fishplated so that wheels riding either on rails *B* or *C* may pass this point.

The entire length of the rail on the right-hand side is fishplated and secured to the ties in the ordinary manner and is paralleled by the inner guide rail, which is bolted to it and held at a distance of 2 in. from it by separating collars through which the bolts pass.

The double rail on the right acts as a raceway, holding the flanges of the right-hand wheels against the inner guide rail. The tension spring at *D* should be strong enough only to pull back the latch to the position shown, after a normal car has passed. A spring with a tension of about 30 lb. should do this work.

The blacksmithing job required is easy, for the material needed is available at any mine. Even the small separating collars and the spring are likely to be found there. The cost complete is nominal, and the saving made by detecting a loose wheel before it has time to cause a smashup at frogs and switches will repay the expenditure.

We have been reading so much lately about mine locomotives and their care that we sometimes feel that the subject has been overstressed. But the E. E. White Coal Co. follows a policy regarding its locomotives that would increase the tonnage at any mine at which it was adopted.

The ideas which suggested the present policy came from two sources. One of these is the railroad. In the care of steam locomotives and, to a lesser extent, of other rolling stock the railroads have ever followed the maxim that "a stitch in time saves nine." As everyone knows, railroad locomotives are given a daily inspection and every evil is remedied regardless of the time or the extent of the repair job.

#### RUN MINE RAILROAD AS RAILROADS ARE RUN

Steam valves are replaced if leaky and all joints are made secure, and this is followed by attention to mechanical details, including a general tightening up of loose parts. Even though the steam locomotive is notoriously inefficient, it is truly remarkable how few are the delays on the railroads that can be attributed directly to the failure of the locomotive. The secret of this continuity of service may be found in frequent overhauls and inspections.

At the Stotesbury mine at least one locomotive is in the shop at all times. They are taken there in turn, not because there is something radically wrong with them but because it is thought that by so doing the interruptions due to locomotive ailments will be minimized. The policy is no longer an experiment, as gratifying results have justified its permanent adoption.

A new locomotive with a proper consideration for its limitations will run a long time without requiring much care. Gradually, however, it will run down; certain parts will have to be replaced because of wear and others as a matter of safety. Virtually this mine never has any old locomotives, as they are completely torn down, one at a time, and rebuilt, putting in new parts where advisable. The electrical features receive the greatest attention in these overhauls, partly because they cause most of the trouble and largely also because their defects are not immediately apparent.

Gears, pinions, bearings and the like may be inspected and their real condition thus determined, but electrical equipment may disclose no weaknesses when inspected physically and yet may be found faulty when tested electrically. On the other hand, the opposite may be true—an electrical test may satisfy the observer whereas a physical inspection may show that the insulation is in poor condition. Armatures, controllers, resistors, coils, cables and so forth do not have lives of equal length, for the intensity of duty of each varies.



Under given conditions and with careful usage the average life of the part may be determined—the length of time, that is, during which the respective parts functioned satisfactorily. By allowing a life for each slightly shorter than that observed in use and making replacements and repairs accordingly the locomotives may be kept going for a long time without frequent and annoying trips to the shop.

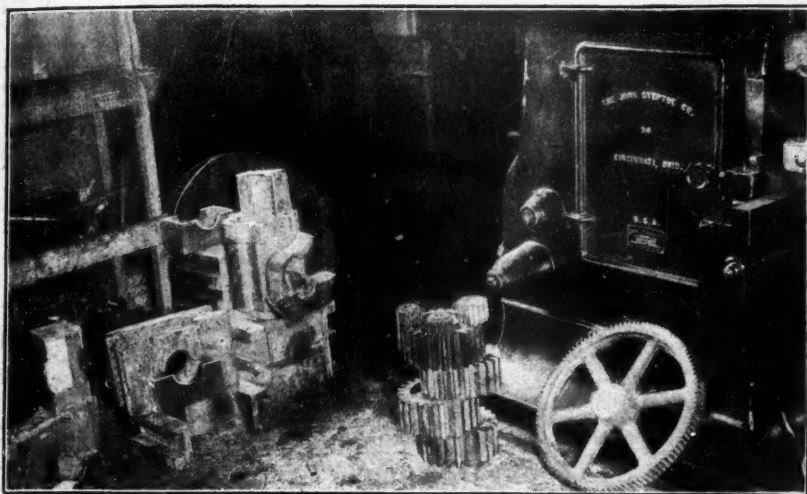
In keeping costs an adaptation of the Indianola mine system is employed to cover the electrical equipment used underground. Each section of the mine is put in charge of an electrician, who is held responsible both for the upkeep and the cost of the electrical equipment in his section. In this way a check is made on the work done by the shopmen, as the electricians are willing to have their equipment overhauled at stated intervals, but do not like having a job that is not done properly charged up to their department.

The upkeep costs of locomotives, pumps, cutting machines and wiring per ton of coal mined are kept separ-

Some mines in West Virginia, and for that matter in other states also, are situated in such isolated regions that only with great difficulty and loss of time are supplies obtained. A complete stock of repair parts cannot be carried without an excessive interest charge, but there are times when a gear or something similar is needed to complete an urgent repair job, and at such times the delay creates a perplexing problem for the management of the mine.

If the plant has been provided with a well-equipped machine shop, a small bronze foundry may well be added so that parts needed in a hurry may be molded, poured and machined in less time than would be consumed in placing an order for them at some distant point. A small bronze foundry, having a capacity of 400 lb. in one heat, occupies one corner of the blacksmith shop at the Stotesbury mine.

With the aid of a small furnace small pinions and gears may be cast, the latter of considerable size, in case of an emergency. Here the journal boxes of locomotives



### Foundry Room

Preparing to cast an ingot of scrap copper. This method of casting the metal into a tangible unit seems to give it a value it would not otherwise have and causes the redemption of many pieces of broken wire and like material.

### Jobs Completed in Foundry

This mine is located at some distance from custom repair shops and from supply houses, and consequently a foundry at the mine prevents delays that would otherwise be inevitable. Certainty of operation is one of the methods by which running costs are reduced.

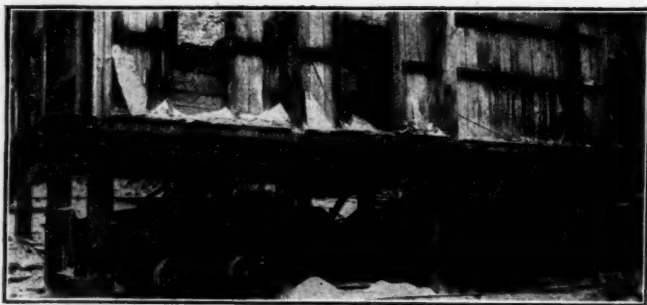


ately for each mine section, and it is the constant aim of each electrician to keep the cost per ton at the lowest possible figure. It might be said here that if the cost of new parts and the workmen's time only is considered this system of renewal is much more costly than the old system where repairs are made only as needed, but if the greatly increased tonnage obtained under the new system as compared with that under the old is taken as a measure, then a saving is effected in favor of the new.

The loss of tonnage under the old method of not repairing until a breakdown occurs should be charged up against the old system. After the practice of making repairs before a failure occurs had been in force a year the tonnage coming from the mine in one month was increased from about 40,000 to 51,000 tons as compared with that attained when the new system had just been introduced.

frequently are made and occasionally bushings are cast. But the foundry is most useful in the casting of metals having comparatively low melting points. Where mines are situated handy to a commercial foundry a job of an unusual character may be completed under the personal supervision of the customer, who can see that just what he wants is constructed, but mines at a great distance from such a foundry are handicapped in this respect, and in such cases a foundry at the mine is more than justified.

No one can gainsay that where possible it is a wise policy to order all replacement parts from the manufacturer, as thereby a better product is assured. It would be foolish indeed to assert that workers at the mine can compete with a commercial house as to the quality and cost of one of its standard products. A small foundry is justified, therefore, only when installed for the purpose of insuring continuous operation of the surface



**HOUSE SET ON POSTS FOR EASE IN LOADING SAND**

It is nearly as easy to unload railroad cars of sand into the bins of this sandhouse as to shovel it into a shed that is set on a level with the ground. The dry sand from the central bin, located between the two stoves, is allowed to drop through a trap into the cars spotted below.

plant. Because this is so the cost of the emergency job is a secondary consideration, so long as a normal coal tonnage is forthcoming as a result.

The furnace in use at Stotesbury utilizes coal as fuel, aided by a natural draft of a 24-ft. air column. The furnace proper is sunk below the floor line and is therefore of the pit type. For the benefit of those who might have need for it, a sketch of the furnace is shown on page 201. The retaining walls and the ash pit are constructed of concrete, the dividing wall and the grate being supported by old rail. The heating chamber is lined with firebrick and the fuel grate was supplied from a sand drier. It rests upon the rails embedded in the concrete. The mouth of the furnace is corniced by a cast-iron channeled collar covered by a cap of like metal. The lower inlet of the chimney is at least one foot below the floor line; consequently it should be protected by firebrick or plastic cement. The use of the latter to line both the furnace and the lower region of the chimney is desirable because of the ease with which it may be applied. The molding, heating of the bronze, pouring and the care of the furnace are placed in the

hands of one experienced foundryman, who, when occasion demands, enlists the aid of one or more of the blacksmiths.

The coal at the Stotesbury mine lies several hundred feet above the railroad track, so that all supplies must be raised up an inclined plane. At the foot of this plane and close by the railroad track stands the sand house, the construction of which has at least one feature of merit. It is elevated upon a foundation of wood posts so as to allow cars to pass under it, thus facilitating the loading of the



**DETIRING A LOCOMOTIVE WHEEL**

A curved pipe which in shape resembles a closed-in question mark is shown encircling the lower wheel and resting on the ground. In practice it is coupled to a straight pipe through which a blower forces a current of air. Coal is heaped about the circular pipe and a high temperature is readily maintained.

dried sands. As the building is constructed of wood the two chambers in which the sand driers stand are fireproofed by a cement lining and steel sliding doors. There are five compartments in the house; on the two extreme ends are located the storage bins for the green sand, and the two drying compartments adjoin these on the inside; between the two driers is a storage bin for dry sand. The latter is provided with a trap in the floor through which the sand is discharged into a sand car spotted beneath. The layout is such as to eliminate all needless handling of the product.

At almost any mine the problem of removing flat and otherwise worn tires from locomotive wheels must be solved. This is accomplished in many ways, among which is the circular burner which circumscribes the wheel to be heated and consumes a mixture of gasoline and air under pressure. This method, while effective and quick, is dangerous and complicated as compared with the method employed at the Stotesbury mine.

The heating device in use at this mine is an adaptation of the gasoline air burner. A piece of 2-in. steel pipe is rounded to form a circle the inside diameter of



**LARRY AND STEEP HILLSIDE SOLVE SLATE PROBLEM**

Where the track has but a toenail hold on the steep side hill a rock once started goes sliding to the very foot of the slope. Here the track rarely if ever needs shifting outward toward the valley.

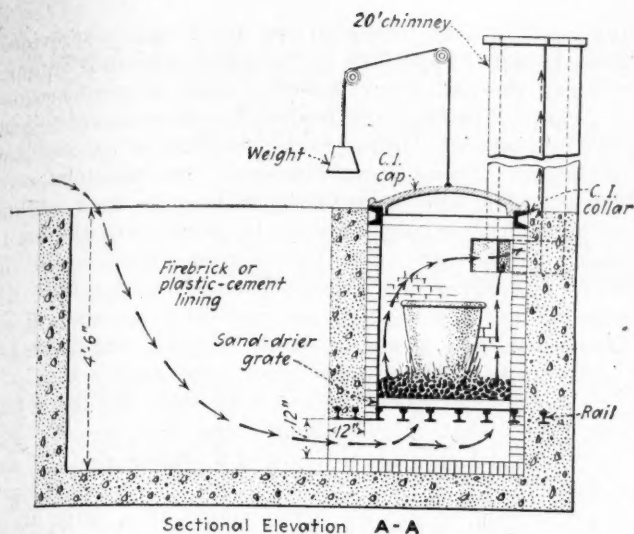
which is slightly greater than that of the locomotive wheel. To complete the burner pilot holes are drilled at intervals.

A socket coupling connects the burner to a 2-in. line which connects up with a small motor-driven air blower. The burner is placed outside the machine shop directly under the hanging point of the boom of a swivel windlass derrick. The connecting air line supplies air from the blower inside the shop to the burner on the outside. Slack coal is used as fuel, heaped up about the burner and the wheel.

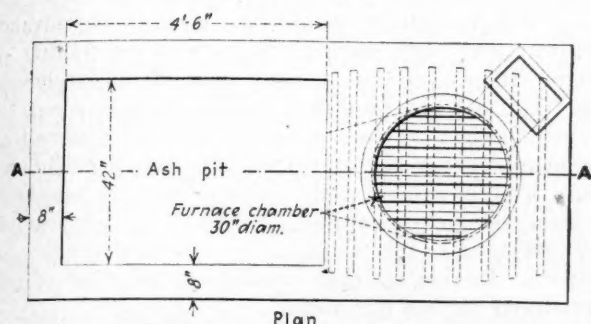
The second cut on page 201 shows a multi-groove split collar to take up play between an axle-suspended motor and the gear it drives. As shown in the figure, six  $\frac{1}{4}$ -in. square-sectioned grooves are cut in the axle on  $\frac{1}{2}$ -in. centers. Four square tongues of similar dimensions are cut upon the split collar to engage into four of the six female grooves on the axle furthestmost away from the suspended motor.

With this provision any side play of  $\frac{1}{4}$  in. plus necessary clearance may be taken up simply by stepping the collar over one groove toward the motor. If the side play is great enough to be taken up but still less than  $\frac{1}{4}$  in. plus the necessary clearance, then the collar may be faced down to meet the correct dimensions. Every locomotive that comes into the shops at the Stotesbury





Sectional Elevation A-A

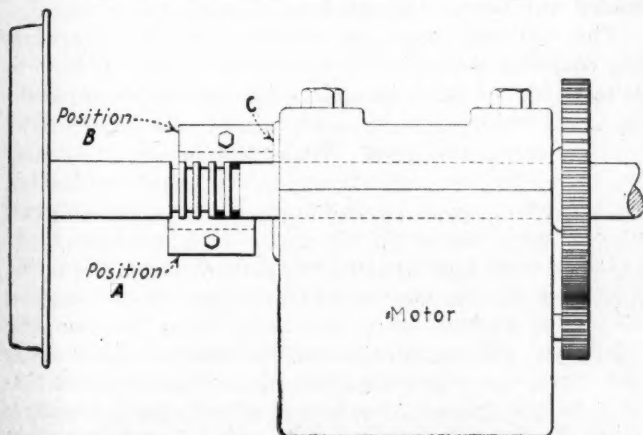


PLAN AND ELEVATION OF FURNACE FOR MELTING METAL

With this simple furnace bronze metal can be melted for small castings, thus saving delays when any part for which repairs are not kept in stock happens to break. The height of the air column is 24 ft.

mine for the first time has its axles equipped with the collar. At few mines in West Virginia has an efficient system of slate disposal been installed. At several mines slate is actually hand shoveled from solid cars; at one mine at least horses and wagons are used; horn dumps and gallows dumps are resorted to extensively. One of the illustrations shows a refuse larry in use at the Stotesbury mine, having been built in its shops. It is nothing more nor less than a tilting container equipped with a lever-controlled end gate.

This box is mounted on a turntable on the upper half of which is mounted a 15-hp. motor which is used for revolving the slate holder and also for raising and lower-



PLAY TAKEN UP BY GROOVED SPLIT RETAINING COLLAR

Takes up any play that may tend to develop between an axle-suspended motor and the axle it drives. It will be clear that a shift of the collar from position A to position B will reduce the play the width between groove centers.

ing it by means of a worm and gear drive attached to a windlass-and-sheave hoist. The body of the larry is mounted on an I-section frame generously reinforced. The larry is driven through the usual pinion and gear attachment to the rear axle by a 15-hp. motor.

At many mines in this state the coal lies far above the railroad and the tramroads and slate roads are veritable shelves cut in the precipitous hillsides. Consequently a slate larry need only be self-propelling and self-dumping. It is not necessary to have it carry the slate away from the larry, for by merely sliding from the tilted bin large quantities of slate may be stowed without any necessity of barring the track over.

## Will Neutralize Mine Water with Marl Before Pumping It to Surface

BY WILMER C. MASON\*  
Columbus, Ohio

A TANK has been installed by the Triangle Clay Co., of Ulrichsville, Ohio, which apparently treats water from the coal mines so successfully that "sulphur" or copperas is removed and the effluent from the plant is made relatively harmless to pumps and pipes.

The installation consists of a wooden tank, 15 ft. long, 8 ft. wide and 2 ft. deep, divided by baffles alternately joining at the top and the bottom of the tank. The water flowing through the tank is thus forced upward and downward through the marl, a natural calcium clay, with which the tank is filled. This neutralizes the copperas, and the product, being insoluble, is caught on the cinders with which the last compartment of the tank is filled and which will be cleaned out from time to time.

The cost of the installation was \$40. It is estimated that one charge of marl in the tank, which holds three tons, will last six months. Marl, at this rate, will cost another \$40 a year.

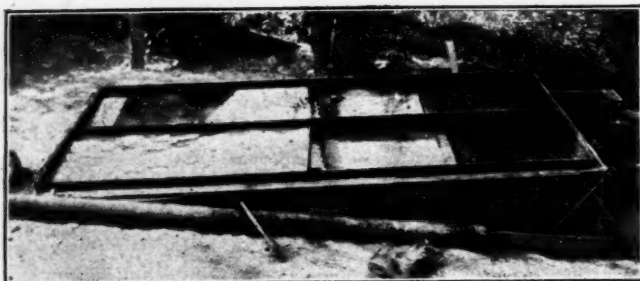
An analysis of the untreated copperas water from the mine showed that it contained 17,800 parts per million of solids, of which 840 were in suspension. The solids in the treated effluent from the tank contained only 2,520 parts per million of solids, of which 60 were in suspension.

The solids in the water were largely sulphates of iron, calcium and magnesium, the iron sulphate giving a strong acid reaction in the untreated water, which, expressed in terms of sulphuric acid, amounted to 446 parts per million. Although the other solids in the treated water, similarly expressed in terms of sulphuric acid, amounted to 87 parts per million, they were largely non-acid-forming calcium and magnesium sulphates, and indicators gave no acid reaction, either immediately after treatment or after the treated water had been allowed to stand a week with the purpose of determining whether the treated water would revert to acid.

Mine water has in the past so polluted streams that cattle and horses which drank it have died as a result. It has destroyed thousands of fish, rendering the streams unfit for use as a source of water supply for domestic or industrial purposes. Many companies have gone to considerable expense in unsuccessful experiments to treat the water before pumping.

The Ulrichsville treatment tank, where the copperas

\*Assistant Supervisor of Streams, Department of Stream Pollution, State of Ohio.



MARL SULPHUR-WATER CLARIFIER FOR COAL MINES

This is set outside the mine, but the best place to put it is underground, where, as at this mine, the water has to be pumped. The water then is clarified before pumping and thus the life of the pump that handles it is lengthened.

is neutralized, was built outside the mine for experimental purposes only, but it will be moved to the sump, so that the treatment may accomplish its purpose of eliminating the cost of the present frequent renewals of pumps and pipes. The system was developed by the Stream Pollution Department of the Ohio Fish and Game Division. Several other mines in Ohio which have been watching the progress made with the preliminary experiments have intimated that they will install the system.

It should be added that the mine is not of large capacity, being worked only for the fuel supply of the clay company. The quantity of water now being pumped is about 500,000 gallons a day. When the strike commenced the mine was allowed to fill with water, which is now being pumped out. Under normal conditions about 100,000 gallons would have to be discharged daily.

### Illinois Mine Inspector Makes Suggestions For Greater Safety in Mining\*

**T**OO many accidents, fatal and non-fatal, occurred last year in the mines of Illinois. Falling coal alone, mostly coal that had been already undercut and shot, was the direct cause of thirty-two fatal and 412 non-fatal accidents. That is too great a number for one state, a single cause and a single year. When I come across an accident from falling coal I am always convinced that it was not really accidental, for it could have been avoided. Mine managers and superintendents contend that some men really die not from accident but from deliberate suicide, but the contention seems difficult to support.

All coal should be undercut or sheared and when undercut it should be snubbed for half the depth of the cut and at least one-third of the thickness of the seam. An accident by which four shotfirers in the Springfield district lost their lives on Feb. 22 of this year would not have occurred had the coal been undercut or sheared before the shots were fired.

We shall make more improvements in the next ten years in the mining and transportation of coal from the face to the surface than we have accomplished in the last thirty years. In the past we have greatly improved our mining machinery both below and above ground, but at the face improvements in mining methods have not kept pace with other developments. The faces of all cross and main entries should have two ways of ingress and egress to the surface, but when driving a single room entry it is not necessary to drive

two headings—an intake airway and a return—provided that the mine is operated by the panel system of mining.

When the panels are 2,000 ft. apart a small booster fan can be placed at the mouth of each stub entry, and this will give the miner better ventilation at the face of the entry than he would receive if two headings were driven. The pipe from the fan can be kept within 10 or 15 ft. from the face of the entry until the headings hole through. Then when rooms are started air sent in at either end will go through without loss. In this manner one heading and several crosscuts will be eliminated, and a saving made in labor and yardage. And yet the mine will be better ventilated.

Someone has asked me: "With only one entry in operation, what if you should have a squeeze?" My reply is that I have never heard of a squeeze that did not close both entries and that in all my experience I have never known of anyone being closed in a mine by a squeeze.\* Furthermore, if coal were mined out in the proper way, no squeeze would take place in the advance workings, but only during the retreat or pulling of pillars. In my opinion a large part of our accidents, both fatal and non-fatal, are caused by taking out too much coal when driving our rooms up. The more tons of coal mined per keg of powder, the less accidents we have. The Lovington Coal Co. has been in operation for over ten years, mining 150,000 tons per year, or 1,500,000 tons in ten years, without a fatal accident at the face. In this mine an average of 150 tons of coal is produced per keg of powder.

Fifty or sixty per cent of the coal can be mined without the use of explosive. If we would drive up our rooms no more than 21 ft. wide, laying the road along one rib and leaving pillars sufficient to support the surface until the room is driven up to the boundary, and if when we start drawing back the pillars we would undercut the coal from crosscut to crosscut, the coal would fall down without the use of powder. This would increase the percentage of lump coal and reduce the percentage of screenings, causing the coal to bring a better price.

One mine in my inspection district, operating under the method just mentioned, produced from 80 to 90 per cent lump over 1½-in. screens. While driving up the rooms the coal was shot with four drillholes instead of three, as in common practice. The first holes were drilled and fired about 3½ to 4 ft. above the bottom of the seam, and the coal below this was shot down and loaded out before the other holes were fired.

The coal was nearly all of lump size. No overhanging coal was left, nor did the ribs of rooms have to be squared up. Under this plan the number of accidents has been reduced, as the undermined coal all fell down on the floor of the room. With this plan also the miner had less work, for the coal was in fine shape for loading. Less powder was used in shooting and a better grade of coal was obtained.

Laws should be enacted regulating the use of electricity in mines, and no gasoline engines of any kind should be allowed below ground. Many mining accidents are due to mine cars, locomotives and hoisting machinery. I believe the time is not far off when belts will be the means by which coal will be transported from the inside parting to the surface. This also will add to safety.

\*Abstract from paper by J. H. Haskins, state mine inspector for Illinois District No. 5, read at the annual meeting of the Illinois Mining Institute at its session June 9.

\*Of course there have been such unfortunate occurrences, but the fact that Mr. Haskins has not come in immediate touch with such fatalities shows that, at least in his district, they are likely to be infrequent.—EDITOR.



# Steel Props Furnish Recoverable, Quickly Set and Self-Adjusting Supports for Mine Roof\*

Designers Endeavor by Use of Sand, Dirt and Shot Beds in Telescoping Props to Provide for Taking Up of Initial Flexure of Roof Without Breakage and for Shortening of Props Prior to Removal

BY JOHN ROBERTS

IN RECENT years, owing to the scarcity and consequent high price of timber, the use of iron and steel has greatly increased. This trend was particularly significant during the progress of the war. Many causes have contributed to enhance the cost of timber, the chief being labor and transportation charges and the gradual exhaustion of forests. There are indications that prices will remain at a fairly high level for some years to come, if not permanently, and that in the future mines will consequently use iron and steel more extensively than ever for the support of the roof.

Steel posts may be classified as follows: (1) Temporary supports, or those used at the coal face; (2) "semi"-permanent supports, or those used on branch roadways, and (3) permanent supports, or those designed to be used on main roadways.

One of the earliest metal props, if not actually the first, to be invented was that patented by W. O. Johnston in 1861. This consisted of a tubular prop made in two parts for easy handling, these being held together when in position by means of a retaining ring. The two parts were preferably inclined at the joints so as to facilitate their removal when the ring was released. Provision also was made to hold the parts together by a catch, if desired.

One form of this prop is illustrated in Fig. 1, the chain shown being used when withdrawing the prop. The objections to this type of support are: The retaining ring is apt to split if it is subjected to excessive pressure, and this tendency is increased when the joints are inclined; no provision was made for the gradual yielding of the prop to the pressure of the roof and although the prop could be withdrawn, the withdrawal was sudden, when it should be gradual. If instead of the ring the alternative catch was used falling stone or coal would be likely to displace it.

## COLLISON DEVISES FIRST ADJUSTABLE PROPS

Little appears to have been done in the way of introducing new metal props during the succeeding thirty-five years, but in 1896 Collison designed adjustable screwed struts (Fig. 2) for use in a horizontal position in trenches and like excavations. The struts were expanded and contracted by a nut which worked on a screw and bore against a washer. This design, however, never may have been applied to mining purposes.

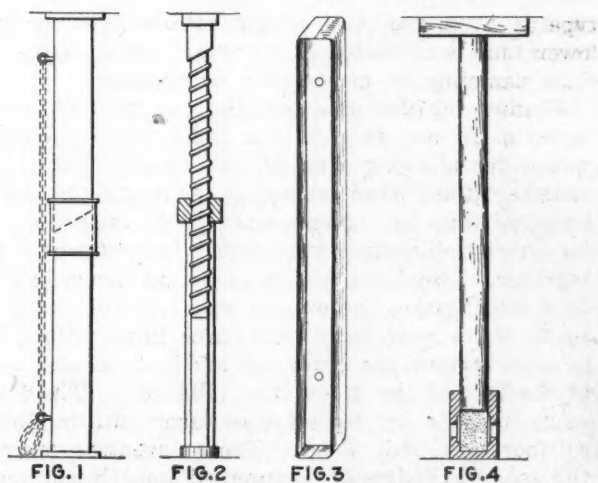
In 1897 Cadman and Marshall patented a stop block for holding in position crossbars and side posts. The stop block was cast in one or two pieces and secured by a wedge-shaped bolt. It served to prevent the prop

supporting a metal crossbar from being displaced. Later in that year Firth and Thompson brought out a metal prop constructed of H-iron, part of the web being cut away and the flanges being bent over to form a flat bearing surface, as shown in Fig. 3.

Several inventors seem to have directed their attention to pit props in the year 1899, about the time when W. H. Hepplewhite patented his system of tapered props, and the principles then first applied were followed by other designers in subsequent years. Green proposed the use of a metal box (Fig. 4) at the foot of the prop. The box was filled with sand, on which the prop rested, and this sand served as a cushion to take up the pressure. Doors at the sides of the box, which could be opened from a distance, allowed the sand to escape when the removal of the support was desired. Green's invention was followed in a few weeks by Baron Masham's adjustable prop (Fig. 5). The prop is made to rest in a hole in the floor, and was designed to carry a channel-iron girder that served to support crossbars. Adjustment was effected by means of a screw turned by a wheel. Security appeared to be a strong feature in this prop, as it could be fixed into both the roof and the floor.

Balmer aimed in his prop to cushion the weight by the use of a flanged and ribbed lower tubular member partly filled with dirt, which served to support the upper member. The adjustment or withdrawal of the prop (Fig. 6) could be effected by means of holes in the lower tube, which holes could be opened or closed at will, thus allowing the required amount of dirt to escape.

Gascoyne used a combination of wood and metal in



FOUR PROPS DEVISED IN LAST CENTURY

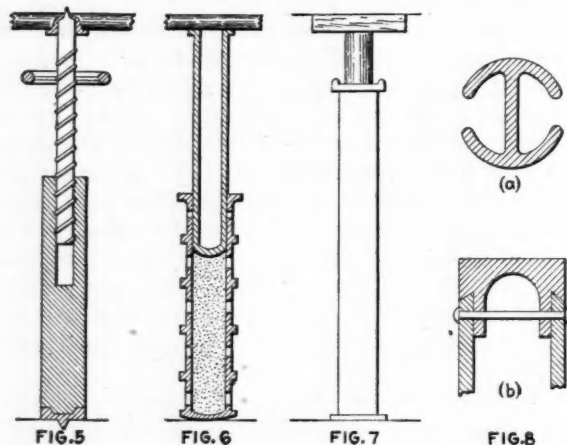
Fig. 1—W. O. Johnston's prop, unadjustable. The slanting cut across the prop facilitates recovery. Fig. 2—Collison's prop with a nut and screw. This strut, the chief notion of which is adjustability, may not have been designed for mine work. Fig. 3—Firth and Thompson's prop of H-iron. The web at either end is cut out and the flanges are bent over. Fig. 4—Green's metal sand box.

\*First part of article entitled "The Development of Metal Supports for Mines," read before the North of England Institute of Mining and Mechanical Engineers, Newcastle-on-Tyne, June 9, 1922. The second installment will be published next week.

his supports. A vertical metal tube or a piece of iron of H-section (Fig. 7) was fitted with a movable crown, which in turn supported a short auxiliary wooden block, on which rested a wooden cap. Wooden blocks also were used with tubular props. The auxiliary block, however, makes the prop less rigid, so that it would be easily displaced by falling coal.

Spencer and Chambers followed soon afterward with props of H-section in which the flanges were bent, as shown in Fig. 8 (a and b), which also illustrates the special form of cap used with this type of prop.

In the year 1900 Garforth, Sutcliffe and Buxton patented an extensible prop which had two extension screws and was specially designed to be used in conjunction with coal-cutting machines. This appears to have been the only important invention of its kind during that year, but in the year following Fowler set out to improve the Firth prop by cutting away parts of the webs of the H-section and placing recessed saddles on them. The flanges were bent down over the saddles, and the latter tended to prevent distortion of the bent flanges. In 1902 Sommer, returning to the Johnston



PROPS DESIGNED IN THE CLOSE OF THE LAST CENTURY AND IN THE FIRST DECADE OF THIS

Fig. 5—Baron Masham's prop, which bit into both the roof and the floor and was adjusted by a wheel. Fig. 6—Balmer's prop, which had a long sand cushion and holes by which sand content could be reduced. Fig. 7—Gascoyne's prop. A metal tube or piece of H-iron acted as a base for a wooden prop. Fig. 8—(a) Cross-section of Spencer and Chambers' prop with H-section having flanges bent inward. Fig. 8—(b) Cap for aforesaid prop.

type of prop, used two tubular members, in which the lower tube was slotted at its upper end so as to facilitate clamping by means of a screw-collar.

Mounier in 1905 proposed the use of shot or other material in one part of the inner tube and devised means for allowing some of this to pass into a lower chamber either when setting up the prop or as the roof pressure came on. Mommertz (1906) employed a collar into which wedges were driven to secure both tubes together. Two forms of this collar are shown in Fig. 9. In a modification the wedges were replaced by a cam. In the same year Lowe used three tubes with a block of wood between the upper and middle tubes and wedges at the foot of the inner tube (Fig. 10). The first of many patents by Nellen was taken out in 1907 in collaboration with Voigt. These inventors suggested the use of cylinders of compressed stone in conjunction with metal.

Nellen subsequently designed a form of arch in which half tubes were held together by clips and filled with alternate layers of compressible material such as cork, straw and wood shavings, and this system was after-

ward applied in a modified form to props. Mounier developed further improvements in his prop, and used a rack and lever for adjustment. A cock was placed near the bottom of the tube to allow the shot to escape when necessary. The rack and lever would appear to be easily put out of action if handled roughly.

Nootbaar, who introduced in 1907 a prop which possessed no very striking improvement, patented several binding devices for tubes in March, 1908. Later in the same month he brought out a tapered inner tube with wedges, similar to those proposed by Mommertz. He also devised a springhead to be used in conjunction with the wedges, but apparently made no provision for the withdrawal of the prop. Nellen again came forward, this time with two semi-tubes screwed together to form a hollow cylinder, which was filled with fine material. A rectangular opening in the lower tube is normally closed by a brace (Fig. 11), but on opening this the fine material escapes, allowing the head of the prop to sink and be withdrawn.

In the Eickershoff pattern (Fig. 12) the upper member rests on a shoulder of a cone-shaped body and is supported on sand, which is forced up through the cone when pressure is exerted. A hole near the foot of the prop allows the dirt to escape when it is desired to lower the inner tub. Normally this hole is closed by a rotary shutter. Caps and feet are placed on the props by means of bayonet joints, and these are fitted with lugs to engage with the levers used to turn them.

#### DESIGNED PROP OPERATED BY SEPARATE TOOLS

In a subsequent design by Sommer the upper member was raised by a mechanism which was independent of, and detachable from, the prop. This raising mechanism consisted of screw jacks, wedges and levers. In one form he adopted a rack and pinion, but in all his patterns the upper part of the lower member was slit so that the collar clamped the parts firmly together.

The year 1909 did not bring forth many ideas of importance, but it witnessed the entry into the arena of W. Reinhard, whose work will be referred to later. Binder devised shoes for holding props and bars in position. Schaefer proposed a form in which the upper member was secured in position (frictionally) by a divided ring placed upon the tapered upper end of the lower member. In this year Pittroff suggested the use of accordion-pleated tubes. The only development of note in 1910 was that of Sommer and the Mannesmannroehrenwerke, in which the sliding members were clamped together and provided with adjustable stop rings or pins. Possibly the Mannesmann weldless-steel prop shown in Fig. 13 is the outcome of the combined efforts of the inventor and factory just named.

In the few years immediately preceding the outbreak of the Great War several new principles were applied. Gruenewald and Gorich, for example, in 1911 introduced the system of holding the upper member by means of a series of balls and of adjusting the prop with the aid of an eccentric and lever at the bottom. Wild adopted the principle of right- and left-handed screw-threaded struts, which were held in contact by means of collars and end sockets, as shown in Fig. 14.

It was during this period that Reinhard developed his roof supports. In his earlier designs the feet of the props were made to receive tapered wooden plugs for yielding to the pressure, but these were replaced later by springs.

A prop of comparatively simple construction was in-



roduced by Humbles (1912). This is shown in Fig. 15. The prop was in one piece, with open tubular ends, in which internal diaphragms formed abutments for the floor or for wooden blocks. Flanged lids or beads were used to strengthen the ends, and the enlargements in the tube made it easy to attach chains and thereby to remove the prop.

Messrs. Mavor, Coulson and Mackay in 1913 encased wooden props in metal tubes, allowing parts of the props at the top and bottom to protrude so that they would yield on compression. In the same year Treinies used telescopic tubes filled with sand (Fig. 16). The upper tube was filled, plugged at the bottom, and held in position by a flange and collar. Means were provided for allowing the sand to escape, a device that is very popular with inventors.

Some of the foregoing supports were exceedingly simple in construction, but others were more complicated and necessarily expensive. The hallmark of refinement, however, was reached by Hodges and Smith, who, in order to indicate the movement of the mine roof, applied to props an electrical arrangement!

The war accentuated the demand for a substitute for timber and inventors continued their endeavors to obtain a suitable substitute. With the object of saving timber, Gainsford suggested using two metal tubes joined in the middle with a wooden plug and having a plug at the top and another at the bottom of the prop. Foggo also set out to save timber, and joined two short lengths of wooden prop by means of double-conical metal sockets provided with exterior strengthening rings (Fig. 17).

#### OTHER DEVELOPMENTS DURING THE WAR PERIOD

Mills (1915) was responsible for a prop which in some respects resembled that of Reinhard, but he used a spring arrangement fitted within a special casing for holding the two parts of the prop together. The prop was adjusted by turning the casing. Verner supported the lower end of his tubular prop by means of a conical wooden block surrounded by a metal sleeve. The narrow end of the block was pointed upward, and yielded to pressure. Edwards and Beard and Slack and Williams also adopted the principle of employing wooden plugs at the foot of the prop for taking up the roof pressure, and the Butterley Co. and Bircumshaw have patented a means of readily removing these plugs.

Ericsson, who had previously devoted his attention to corrugated caps or lids, in 1915 devised the corrugated tube shown in Fig. 18. A suggested improvement on this type will be referred to later. The principle of the Wrightson and Ringquist prop will be readily understood on reference to Fig. 19. This prop consists of an inner and outer tube so arranged that the upper member rests on sand within the lower member. An aperture at the foot allows the sand to escape when necessary. When this aperture is closed, the sand passes up through a perforated plate at the lower end of the inner member as the pressure is applied. A perforated cap provides for the insertion of sand as required.

The form of prop shown in Fig. 20 was devised by J. S. Jones (1917), the chief feature of which appears to be the valve, which has two side apertures at right angles to a central one. In setting up the prop the side apertures allow the sand to fall around the lower receptacle until the prop is adjusted. These apertures are then closed and the central one opened, and this

allows the sand to descend into the lower receptacle to a distance corresponding to the load on the prop. Robertson, in the same year, reinforced concrete cigar-shaped props with a spiral strip of metal. They were provided with end caps having serrated edges forming teeth, some of which were turned inward so as to penetrate the concrete.

Kearsley (1918) adjusted the inner member of the prop by means of pins inserted in holes in this bar. The whole appliance could be tightened by a screwed sleeve at the top of the outer tube. In the Sutcliffe and Sheppard type the lower member is hollow and is provided with teeth that engage in other teeth on the inner member and are kept in engagement by means of a gib-headed wedge so arranged that it may be loosened when desired without being completely disengaged.

A prop for mining purposes should possess the following characteristics: Strength, rigidity, resiliency, lightness, durability, adjustability, reliability, and simplicity of construction consistent with the foregoing qualities; it also should be easily withdrawable and

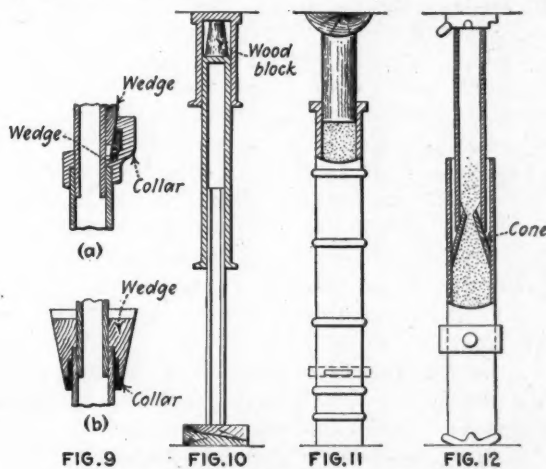


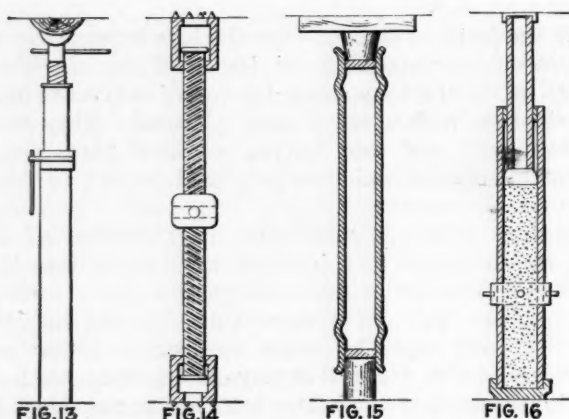
FIG. 9 TWO TYPES OF WEDGE COLLAR (a) AND (b) INVENTED BY MOMMERTZ.

FIG. 10—LOWE'S THREE-TUBE PROP WITH BLOCK OF WOOD. FIG. 11—NELLEN'S TWO SEMI-CYLINDERS, JOINED BY SCREWED BANDS AND FILLED WITH SAND, SUPPORT A WOOD PROP. SAND CAN BE ALLOWED TO LEAVE THE STEEL PART OF THE PROP THROUGH A RECTANGULAR ORIFICE THAT IS OPENED OR CLOSED AT WILL. FIG. 12—EICKERSHOFF PROP WITH CONE.

comparatively inexpensive. With regard to construction and expense, where a prop possesses every other requirement, the cost, within reasonable limits, is not so important, because the props can be used repeatedly and recovered in safety, and although the original cost may be high, economies eventually can be effected by their use.

In order that a steel prop may commend itself to a miner it should be capable of being set up easily and quickly, and when fixed it should be safe. When the preparation and setting up of supports entail much trouble there is often a strong temptation to the miner to delay the operation, and accidents have frequently occurred from this cause. To measure and cut a post and to prepare a cap, or "lid," takes much more time relatively than the actual setting up of the prop, and miners do not like to interrupt the process of filling a car of coal in order to put up timber.

When a workman sees that by removing, say, half a ton of coal he will have room to erect a necessary support he should in his own interest prepare the prop and cap beforehand. Many miners do this, but others omit the precaution and take risks. The temptation to do this is reduced where adjustable props that do not



PRE-WAR PROPS OF MANY TYPES

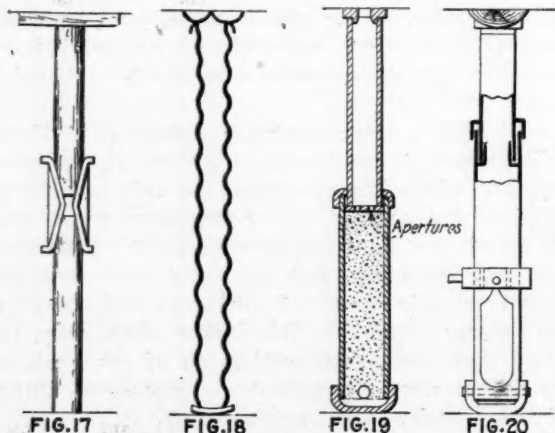
Fig. 13—Mannesmann weldless-steel prop, the sliding members of which are clamped together. Fig. 14—Wild's prop with two oppositely turning screws, a central nut and two sand boxes. Fig. 15—Humbles' prop. A simple prop made out of a single tube with two diaphragms which form bearing pieces for two extremely short wood props. Fig. 16—Treinies' prop. Two telescoping tubes, the lower being filled with sand and having a hole by which that cushioning material may be allowed to escape.

require to be cut are in use. A prop which is considered to fulfill many, if not all, of the requirements of a handy and reliable support will now be described.

The underlying principle of the types illustrated in Figs. 21 to 23 is the employment of oval or partly oval and partly cylindrical tubes which can be adjusted longitudinally and be interlocked by partial rotation. The lower member, *a* (Fig. 21), is partly cylindrical and partly oval, the oval section being provided with horizontal ribs, *b*, which extend over part of the inner surface. The upper member, *c*, also is partly oval and partly cylindrical, but the major axis of the oval portion is slightly shorter than the minor axis of the lower member.

When the major axes of both members are parallel the upper member is free to move vertically within the lower member. The inner tube is provided with external flanges, *d*, which are adapted to engage in corresponding slots in the outer tube. On rotating the inner tube through 90 deg. it becomes tightened by friction as the flanges become engaged in the slots.

A clamp collar, *e*, is free to slide, within limits, on the upper member and is used to lock the two members in position, as shown in Fig. 21 (*d*). This collar is provided with wedge-shaped or tapering slots that engage corresponding ribs, *f*, on the inner tube, this



WAR TYPES OF MINE PROPS

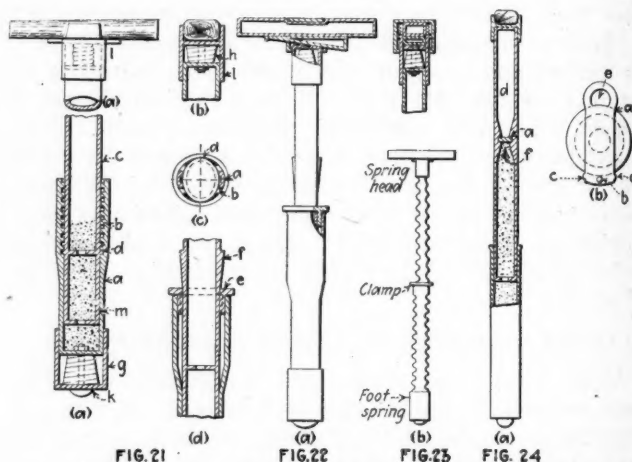
Fig. 17—Foggo metal socket for joining two short props. Timber already broken can be cut into short lengths and these lengths coupled by the Foggo socket. Fig. 18—Ericsson's corrugated tube prop with a cap of unusual design. Fig. 19—Wrightson and Ringquist's prop. The upper and inner telescopic tube has apertures allowing sand to escape upward under heavy pressure. Fig. 20—Jones prop, which also uses sand as a cushion and regulator.

facilitating the turning of the inner tube as required.

The foot of the prop rests in a metal box, *g*, in which a spring is fitted to take up the pressure when the load is applied, and a similar spring *h*, is fixed at the head of the prop. It will be observed that the bolt *k*, which passes through the lower spring, is provided with a large head, which may be either round or square. This head serves to prevent the prop from being readily displaced after being properly set in a hole in the floor. The cup *l* (Fig. 21, *d*), carrying the head spring, is especially made to form a support for the cap.

The lower end of the inner tube also is provided with a cylindrical extension, *m* (Fig. 21, *a*), which constitutes a false bottom, and is provided with apertures for the passage of sand. In this type the sand is not used for supporting the upper member but simply to produce a cushioning effect during withdrawal and to prevent the sudden drop of the inner tube when disengagement takes place, as will be described later.

To set up a prop, a small hole is made in the floor to receive the bolt *k*; the inner tube is raised until the



FOUR PROPPING DEVICES DESIGNED BY AUTHOR

These props have oval or partly oval and partly cylindrical tubes which can be adjusted longitudinally and locked by partial rotation. On turning the inner tube (see Fig. 21), the flanges which form a part of it enter slots in the outer tube and so lock. Until one of the tubes is turned they are free to move relative to one another except as opposed by the resistance of the sand cushion.

cup *l* touches the roof; it is then turned through 90 deg. and locked, being lowered if necessary an inch or so to enable the flanges to engage in the slots; the clamp collar is lowered into position, and the wooden lid is then driven in and tightened.

In order to withdraw the prop the clamp must be raised and fixed to the ribs; a chain should then be attached to the clamp, and the clamp given a partial turn from a safe distance. The upper member will then sink gradually on the sand, forcing it up through the apertures, and the prop will be loosened.

Fig. 22 shows a modified form in which a metal cap is used. It is so arranged that it can be secured by means of a wedge which cannot be withdrawn, whereas the cap may be removed on loosening the wedge. The final adjustment and securing of the prop is obtained by means of the wedge and cap, the box in which they are fixed being free to move vertically.

The principle of the oval interlocking prop may be applied to the corrugated type made by Ericsson (Fig. 18), for it will be seen that by using oval corrugated tubes (Fig. 23) advantage can be taken of the corrugations to facilitate adjustment and interlocking.

Another type for which I am responsible is shown



in Fig. 24. In this case sand is used for supporting the upper member, and the chief feature is the flat slidable plate valve, *a*, a plan of which also is shown. This valve is normally closed and prevents the passage of sand into the upper chamber. It is provided with a hole, *b*, for the insertion of a pin to keep it from being accidentally opened, and lugs, *c*, prevent its being completely withdrawn from the tube. Before setting up, the valve is opened and sand allowed to pass into the chamber *d*. The prop is then adjusted, the required amount of sand being run into the lower chamber for this purpose, and the valve is closed. As the load comes on, the sand in the middle and lower chambers is compressed, and a gradual yielding takes place.

In order to withdraw the support the valve is opened from a safe distance by means of a chain fastened at *e* and the upper member then sinks as the sand passes upward through the aperture *f*. The advantages claimed for this form of prop over somewhat similar types are the ease and comparative safety with which it may be removed and the fact that the sand is retained within the prop.

### When Headframe Burns Colorado Shaft Mine Resumes After Thirty-seven Days

**T**HIRTY-SEVEN days is a short time within which to see a disastrous fire destroy the top works of a mine, the construction of a new plant and the resumption of coal production, but thirty-seven days was enough time for that rapid series of events at the Monarch No. 2 mine of the National Fuel Co. near Louisville, Boulder County, Colorado. Today that mine is far better equipped than it ever was before and can produce 1,200 tons of sub-bituminous coal in eight hours when the whole operation is going full blast.

On the night of Nov. 15, 1921, the consuming flame did its work at Monarch No. 2. The structures over the shaft were all of wood and burned readily. The whole surface plant except the power house was reduced to ashes, and the wooden shaft lining was ruined to a point 65 ft. below the collar. Headframe, tippie, car loader, track scales, cages, trestles, chutes and practically all the top equipment of the mine went up in smoke.

It was a discouraging appearance the mine presented the next day. But the market for that particular coal was strong enough just then so that the National Fuel Co. could not afford to sit down and grieve. Rush plans for new top works were made, and the job of shipping material and equipment started at once.

A permanent headframe and scales were thrown up in a hurry, and a temporary tippie was ready for service as soon as the hoisting equipment was opera-



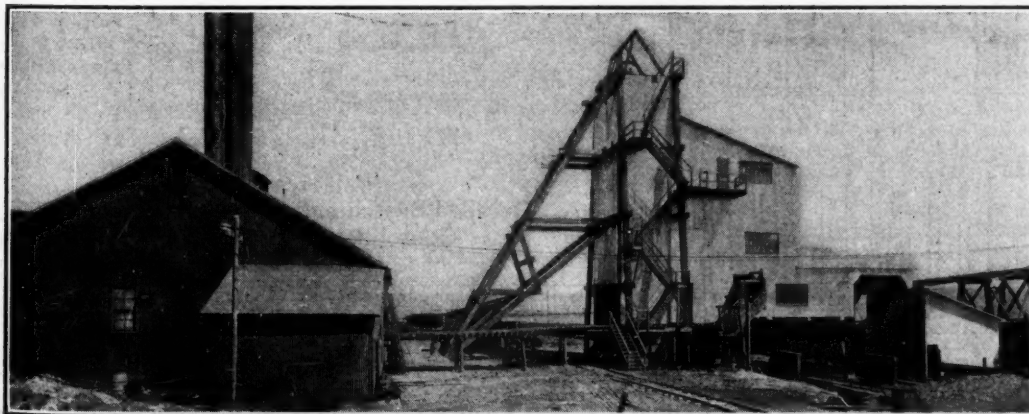
PREPARATION PLANT AT MONARCH NO. 2

This view shows the nut conveyor from the balanced picking-table screen. This tippie was built to handle an output of 1,200 tons of sub-bituminous coal every working day.

tive. On Dec. 22, exactly thirty-seven days after the fire, the mine began loading coal once more.

With more leisure the company chose equipment for the permanent steel tippie. Roberts & Schaefer, of Chicago, constructed the plant, which contains balanced picking-table screens, self-dumping cages, a belt-type box-car loader, scales and other modern equipment. Whereas the destroyed plant had but two tracks, the new one, which was finished April 1, 1922, has three, so that the mine can load every size of coal that may be required. The Monarch mine now uses electric power.

**MATERIAL FOR GEOPHONE DIAPHRAGMS.**—An investigation conducted by the U. S. Bureau of Mines to determine the most suitable material for geophone diaphragms showed that in mica diaphragms the thickness was not an important factor. Metal diaphragms were not only more satisfactory than the mica but their sensitiveness increased with thickness until a point was reached when a ringing tone was produced and the diaphragms therefore became useless. With the exception of Non Gran bearing metal, a material 0.025 in. thick was the maximum thickness that could be used. With Non Gran bearing metal, however, a diaphragm 0.035 in. thick was satisfactory. To determine the sensitiveness of the diaphragms, observations with the geophones were made on blows struck with a 5½-lb. hammer swung as a pendulum against the coal at a distance of 400 ft. away from the observer. The swing of the pendulum was measured, and the shortest swing that could be detected with the geophones was recorded. The results obtained at the experimental mine with the different materials are given in Technical Paper 277, just issued.



### Monarch No. 2

The headframe, scales and temporary tippie were constructed and in service the thirty-seventh day after a fire destroyed the old plant. This permanent, fireproof tippie has been operating since April 1.

## Britain Leads Germany in Coal Resources; Foreign Production Figures for 1921

**B**EFORE the war Germany had larger coal resources than any European country, with Great Britain second. All this has changed. Germany has a little more than one-quarter of the coal in Europe and Great Britain almost one-third. This, of course, has not arisen from any enlargement of the British resources but by the handing over of some of Germany's coal areas to other nations. These facts are derivable from the third report of the Imperial Mineral Resources Bureau of Great Britain, which contains a general review of the principal mineral industries of the British Empire and other countries for and as of the year 1921.

Other countries have gained territory from Germany, Austria and Russia, and their quotas have been increased accordingly. Taking into consideration only the actual and possible reserves of true coal and lignite or brown coal in seams 12 in. thick and over within a depth of 4,000 ft., in accordance with the estimates obtained by the executive committee of the International Geological Congress held in Canada in 1913, the position before and after the war may be summarized roughly as follows:

PERCENTAGE OF TOTAL RESERVES OF EUROPE BY COUNTRIES					
	Pre-War	Post-War		Pre-War	Post-War
Germany.....	40.2	28.7	Norway (including Spitsbergen).....	1.7	1.7
United Kingdom of Great Britain and Ireland.....	32.0	32.0	Spain.....	1.1	1.1
Russia.....	11.6	0.4	Other countries.....	1.3	1.4
Austria-Hungary.....	8.3	*0.2	Czechoslovakia.....	.....	4.7
Belgium.....	2.1	2.1	Poland.....	.....	13.3
France.....	1.7	3.6	Ukraine.....	.....	10.8
				100.0	100.0

\* Austria, 0.1; Hungary, 0.1.

Austria's reserve was 41,377,000,000 tons. It is now only 388,000,000. Hungary had 1,718,000,000 and now has 610,000,000. Russia had 60,170,000,000 and now has 1,988,000,000. Germany had 207,930,000,000 and now only 148,248,000,000. The United Kingdom had, and now has 165,387,000,000. The whole of Europe has a reserve of 517,221,000,000 tons.

Whereas 31 per cent of Germany's fuel production in 1913 was of lignite, in 1921 it was over 47 per cent. Taking into consideration the relative potentiality of coal, lignite as produced and lignite as marketed and converting the quantities of the several forms of fuel into their equivalent coal value, the following results are obtained:

GERMANY'S DISTRIBUTION OF EARTH FUELS IN EQUIVALENT COAL VALUE IN MILLIONS OF TONS

	Production	Imports	Exports	Consumption
1913.....	207.5	15.1	42.5	180.1
1920.....	156.2	0.3	23.2	133.3
1921.....	158.4	1.9	25.5	134.8

The United Kingdom in 1921 produced 168,000,000 tons, in 1920, 229,500,000, and in 1913, 287,000,000. Of this,

24,660,552 tons was exported in 1921, 24,931,853 in 1920 and 73,400,118 in 1913.

The average realized value of the coal mined at British mines in January, 1921, was 30s. 7d. (\$7.44) and in December of the same year was 19s. 6½d. (\$4.75), the corresponding figure in 1913 being 10s. 1½d. (\$2.46). Wages were at their highest level in January, 1921, the average wage per person employed being £22 1s. 9d. (\$107.49). For the quarter ending Sept. 30 the corresponding figure was £47 12s. 7d. (or \$77.26 a month). Since that time wage rates have been much reduced.

The average f.o.b. value of exported coal in January, 1921, was 67s. 1.3d. per ton (\$16.33), compared with 70s. 5.7d. per ton (\$17.15) in January, 1920. The average value in December, 1921, was 25s. 2.2d. (\$6.13), compared with 84s. 7.4d. (\$20.59) in December, 1920. All the converted values given are at normal rate of exchange—namely, \$4.8665 per pound sterling.

France's available production for 1921 is nearly equal to that before the war. True, the production of the areas in pre-war France is only 29,000,000 tons, but the Saar area added last year about 9,500,000 tons to the total, bringing the production roughly up to that in the pre-war period. Belgium's coal fields are producing more than before the war, last year's production being 21,800,000 tons.

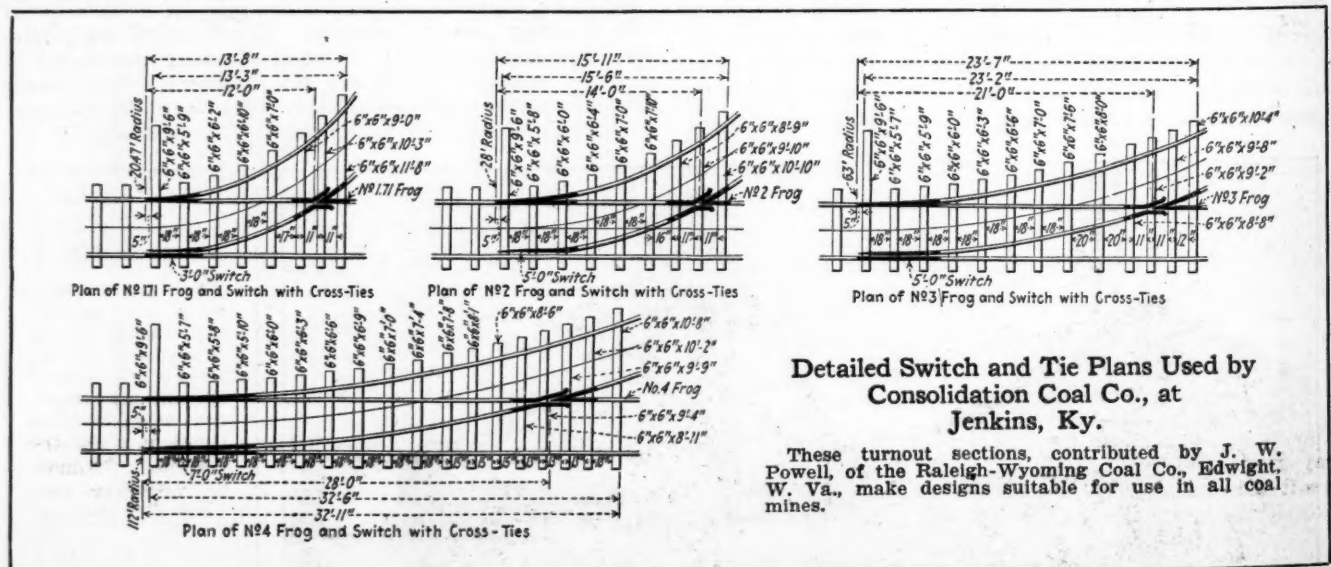
India's production is not definitely known at present. It may have fallen to 15,000,000 tons owing to the fact that with increased wages the men did not find it necessary to work steadily and a labor shortage consequently resulted. Furthermore the railroads were unable to supply enough cars.

South Wales and the Union of South Africa by export to India provided for this shortage in production. The output of the South African colony rose from 9,600,000 tons in 1913 to 10,160,000 in 1921 and exports from 800,000 to nearly 1,200,000 tons. The provinces contributed as follows:

OUTPUT OF UNION OF SOUTH AFRICA

	Output Long Tons	Value Per Ton s d N.E.	Percentage of Whole Output 1921	Percentage of Whole Output 1920
Transvaal.....	6,203,001	7 4 1.78	61.00	62.58
Cape.....	5,159	17 7 4.28	0.05	0.05
Orange Free State.....	819,443	6 9 1.64	8.06	8.42
Natal.....	3,141,161	15 7 3.79	30.89	28.95
	10,168,764		100.00	100.00

The coal production of Australia, including brown coal, totaled 12,867,325 tons, compared with 12,968,285 tons in 1920. The Canadian production was about 90 per cent that of the previous year—namely, about 13,250,000 tons as against about 15,000,000—the important decreases being in Nova Scotia and Alberta. The United States exported 12,250,000 tons of bituminous coal to Canada in 1921 as against 14,500,000 in 1920. The fall in the aggregate of production and import in 1921 as compared with 1920 was 4,000,000 tons and resulted from the depression of industry, particularly in the steel trade of Nova Scotia.







# Problems of Operating Men

Edited by  
James T. Beard



## Timber Frames in Headings

Use of Full-Length Posts to Support the Collars—Disadvantage in Liability to Being Knocked Out by Derailed Car—Another Plan Uses Short Legs Set in Hitches—Plan for Pitching Seams

IN THE issue of *Coal Age*, May 25, p. 886, appeared an inquiry regarding the manner of timbering a heading driven in coal  $5\frac{1}{2}$  ft. in thickness and overlaid with 12 in. of drawslate, above which was mixed coal and slate. The object sought was to reduce, as much as possible, the expense of cutting hitches, 8 in. wide and the same depth, in the coal and drawslate above, required for the short legs used to support the crossbars or collars.

One plan that I would suggest is to use full-length legs under the collars, as indicated in Fig. 1, widening the entry, if necessary, so as to give the desired clearance between the legs. As shown in the figure, I have made the entry 12 ft. wide, instead of 10 ft.,

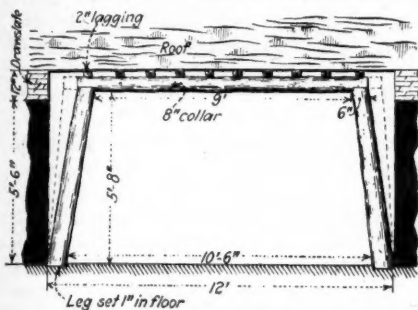


FIG. 1. TIMBER FRAME, LONG LEGS

and set the posts 10 ft. 6 in. spread at the bottom, with a width of 9 ft. between notches under the collar. An 8-in. collar should be used and 2 or 3 in. lagging laid over the collars to support the roof, which is described as a mixture of coal and slate and will probably need this support.

The collar shown in Fig. 1 is 10 ft. in length; but, if desired, a longer collar can be used and the posts given less inclination, as indicated by the dotted lines. The disadvantage of this plan, of course, is that the long legs are liable to be knocked out by a derailed car when hauling a trip.

Another and, perhaps, a better way is that shown, in plan and elevation, in Fig. 2, which eliminates the use of legs, the collar beams being supported by a special type of hitches cut in the drawslate. It is true the drawslate may prove hard cutting. If the slate is soft and crumbles on exposure to the air the hitches must be cut down to the

coal, which appears to be firm, as the posts are shown resting in the coal, in the original inquiry.

As shown in Fig. 2, a simple box hole is cut in one rib of the entry, say 6 in. deep and large enough to receive one end of the crossbar. In the opposite rib, has been cut what should be styled a "slip hitch," which needs no further explanation than the illustration shown. When the crossbar is in place it is wedged with pine wedges.

### STEEL TIMBERING MORE ECONOMICAL THAN WOOD IN THE END

Regarding the comparative cost of wood and steel for crossbars, if steel I-beams or old rails are available and the life of that portion of the mine is to extend over a long period, the steel will be more economical in the end than wood. The frequent renewals of timber will more than equal the higher first-cost of the steel. This is particularly true in the West where so much native pine is used in the mines.

Before closing, allow me to refer to a method of timbering entries in the

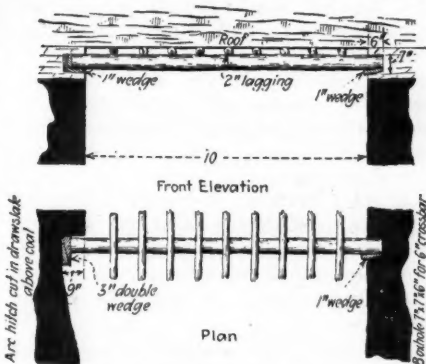


FIG. 2. SUPPORTING COLLARS IN HITCHES

moderately pitching seams, in Routt County, in this state, where the coal is too soft to support short legs set in hitches. Naturally, under the conditions shown in Fig. 3, what water collects on the levels drains to the lower side of the road and caused the bottoms of those posts to rot more quickly than on the high side, when those posts were set down on the bottom.

Moreover, because of the fill covering the foot of each post, the condition of

the posts on the low side of the level would not be detected till too late and the posts gave way suddenly. The upper part of the post, to all appearances, would still be sound and good. Again, replacing these posts was difficult as they must be dug out and the new post set down in the fill.

In order to overcome these difficulties, resort was had to the use of an

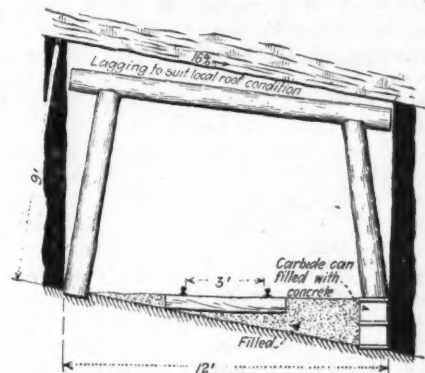


FIG. 3. TIMBERING GANGWAY OR LEVEL, INCLINED SEAM

empty carbide or powder can, which was first filled with concrete and set down firm on the bottom. As shown in the figure, each post on the low side of the entry was stood on such a concrete-filled can, which raised the foot of the post above water drainage and prevented its decay.

Mt. Harris, Col. THOMAS ALLEN.

## Solid Shooting

Actual dangers more important than possible dangers arising from the practice—Conditions in pick mining contrasted with those in solid shooting—Shearing vs. center-top or bottom-mining—Reasons for condemning unregulated solid shooting.

THE subject of solid shooting has been so well and thoroughly discussed, in the columns of *Coal Age*, it would seem that little of material interest can be added either in advocacy or condemnation of the practice, proceeding in the manner in which it has generally been considered and treated. It is my object in the present letter to discuss more particularly the dangers that actually result from the practice, rather than the one, on which so much emphasis is laid, as being possible through the practice.

For the last several months, I have read with care and much interest the various letters on this subject. Almost invariably those writers who have condemned the practice have assumed

that the greatest danger to be feared in solid shooting, or the shooting of coal that has not been properly mined, is the possibility of a blownout shot causing a coal-dust explosion. Again a few writers express their disapproval of the practice, without assigning any particular reason for their opinion.

#### PICK MINING VS. SOLID SHOOTING

While not an advocate of solid shooting, I would not presume to condemn it solely for the reason just mentioned, as it has been clearly demonstrated, by good practical mining men, that such a possibility is as liable to occur in machine- or pick-operated mines, as in mines where solid shooting is practiced. Indeed, it is my opinion, based on observation and experience, that there is a greater possibility of a blownout shot occurring in a pick-mining operation than in a mine where shooting off the solid is practiced and even though the practice is not regulated either by statute or official supervision.

In pick mines, the miner is accustomed to mine the coal to a certain depth, drill a specified depth of hole and use a specific charge. This becomes routine work. If, for any reason, a hole is drilled on the solid the amount of explosive necessary to perform the work effectively becomes a matter of guesswork and the possibility, if not probability, is that it will be inefficiently handled.

On the other hand, a man when shooting off the solid has variable conditions of blasting to contend with, and this variability has cultivated his judgment to that degree that he seldom undercharges a hole. As a rule, where such shooting is practiced, the general tendency is to overcharge the hole. That such is the case may be readily perceived by any one who has worked in or inspected a mine of this kind. As a result, the coal is found scattered all over the working places and in a more or less finely divided condition. In such mines it is the more finely divided coal that is not utilized by the miner and, consequently, in every working place is found much of this fine coal.

#### COAL THAT IS PROPERLY MINED

One of the conditions of "properly mined" coal, as defined by the Pennsylvania Bituminous Mining Laws is that the coal shall be sheared by pick or machine. In a former article on this subject, I endeavored to point out that the blasting of sheared coal differed in no respect from the shooting of coal from a loose end; also, that the mining of coal, in any part of the seam, created only a loose end by which the removal of the coal is more easily accomplished.

In center-top- or bottom-mining, the cutting, if properly done, should extend all across the working face before any shooting is undertaken. In shearing, on the other hand, the cutting is confined to one, or not more than two, localities, the coal being cut through the thickness of the seam. Conse-

quently, after a shot mined by shearing is fired, the remainder of the coal is shot off the loose end.

Such a process evidently requires a maximum of explosives, to produce the same amount of coal by either of the other methods of mining. It is well known to coal miners, and should be to operators, that undermined coal is the more easily and economically removed, physical conditions being favorable, since gravity assists in its fall, and a minimum of explosives is then required and a superior quality of coal is generally produced.

The State Bureau of Compensation Insurance of Pennsylvania has taken a practical view of the shooting of sheared coal by recognizing the condition as being analogous to an unmined loose end, and has classed such shooting as being, for all practical and rating purposes, solid, a view which is entirely consistent if the shooting of unmined coal on a loose end be regarded as such solid shooting.

#### WHY SOLID SHOOTING IS UNSAFE

My personal reasons for condemning the practice of solid shooting where it is not legalized and effectively supervised are the following:

1. It requires a greater amount of explosives to produce the same amount of coal than by either top-center- or bottom-mining.

2. The excessive use of explosives is deleterious to health by reason of de-vitalizing the mine atmosphere.

3. A greater volume of fine coal is produced, particularly in the seams of the lower geological measures and in all seams where the texture of the coal is of a friable nature.

4. A large proportion of such fine coal is of the impalpable variety, or that which is most susceptible to a high temperature in initiating a coal-dust explosion.

5. Excessive charges and the tendency to overcharge a hole causes a more widespread dissemination of dangerous dust and renders difficult its complete removal.

6. As a natural deduction from the foregoing, an explosion of gas or dust, in such a mine, would be greater in extent and more devastating in effects than in a pick- or machine-worked mine.

The prohibition of such practice, in addition to being productive of greater safety in operation, is also productive of greater economy to an operator whose market lies at a transportable distance from his mines. The excessive production of fine coal and the friable character of the larger sizes produced by this method, will cause the product to greatly deteriorate, in the more highly combustible qualities and, consequently, in its market value, by the time it reaches its destination. For an operator who consumes his own production where it is mined, or whose market is a local manufacturing one, the subject may not be of such vital consideration. I. C. PARFITT.

Washington, D. C.

#### Law and Justice

*Supremacy of the law—Authority of Courts—Confusion caused by mis-statements of leaders and the Press—Bad example and faulty education poisons the mind—Solution of the problem.*

WITH pleasure and much satisfaction, I read the editorial entitled "The State, It is I," *Coal Age*, Apr. 20, p. 643. The writer of the article refers to the time when a French king made the bold declaration "The State, It is I," and there was some truth in the words he spoke.

Today, in this enlightened country and generation, the conditions are far different from what existed under an absolute monarchy. There, the people were subject to the will of the ruler, whose word was law.

How many of us realize that the Law, here, is supreme. It is with regret that we observe how intelligent men, at times, sidestep the judicial branch of our government and attempt to set aside the law and replace it by suggestions of one kind and another that, in their opinion, would meet the present situation.

#### UPHOLDING LAW BRINGS CONDEMNATION TO JUDGE ANDERSON

Federal Judge Anderson is, today, the most despised man, in the opinion of a certain class of miners, because of his interpretation of the law bearing on the 60 per cent increase and 6-hr. day demanded by the leaders of the miners' organization, who claimed that it would give the men more steady work.

In this decision, the Court only upheld the supremacy of the law, and refused to permit the suggestion of one class of citizens to supplant the enactment of the lawmakers. It is not strange that, almost without exception, the attempts of propagandists of both parties to reconcile employers and employees result in driving them farther apart.

Confusion in the minds of the public, has been caused by the statements of leaders of both parties to the present controversy, through the daily press. Articles have been written, based on the suggestions of cabinet members and congressional committeemen, that have no standing in the face of the law.

On the one hand, we read how certain individual miners drew exceptionally large pay, at the end of the month, amounting to two or three times the average earning capacity of a miner. On the other hand, we read of extraordinary profits, amounting to millions, that have enabled certain companies to pay fat dividends.

Viewed from an unprejudiced standpoint, the present situation has grown out of the bad example often set by the luxurious living and faulty education of many who have accumulated wealth and are spending it wholly on themselves, while they manifest little regard for that class of workers on



which their activities depend. It is this condition that poisons the mind and makes it impossible for the two classes to work harmoniously together.

Time and necessity will bring the miner back to his work; but the problem will still be unsolved. Reduced wages cannot provide for him steady work, as has been argued. In this locality, out of a possible 300 working days in the year, one of our mines worked 88 days, at intervals of one or two days a week. Another mine did a little better and worked 124 days during the year. The same conditions have prevailed practically throughout the entire competitive field.

Assuming the wages of miners are cut in half, can it be expected that they will work twice the number of days they worked previously? But, it must be remembered that double the working days will double the production of coal and, unless another system of mining and marketing is established, what would be the result?

It is a shame to think of the chaotic condition existing in this country at the present time when there is complete harmony between nature and mankind, and discord only between men and men. In my opinion, the only solution to the problem is expressed in the words "Co-operative mining and collective marketing" of coal. This alone, I believe, can bring about a practical solution.

HENRY BOCK.

Staunton, Ill.

### Testing a Safety Lamp

*Every lamp tested by lampmen when given to miners—Tested again by fireboss—Habitual practice of an experienced fireboss—Two conditions that insure safety.*

I HAVE been employed in many gassy mines worked exclusively with safety lamps. Naturally, the reference made by Joseph Cain, in his letter, *Coal Age*, July 13, p. 60, to statements of his firebosses regarding their practice in the use of safety lamps, interested me greatly.

It is hard for me to understand how any responsible fireboss could offer such an excuse as Mr. Cain says his men gave for failing to properly test their safeties, by blowing into their lamps after assembling them and before carrying them into the mine to make an examination.

The excuse these men gave was that they were afraid to tighten the lamp against the glass more, lest the heat of the lamp should expand the parts and break the glass. Of course, it was possible to blow out the light in a lamp so carelessly assembled.

In mines where I have been employed, when a miner got his lamp from the lampcabin the man in charge tested it by blowing into it, at both the top and the bottom of the glass, before giving it to the man. Each miner then had to take his lamp to the fireboss who made the same test and

returned it to the man. Many of the miners would test their own lamps in the same way.

As mine examiner (fireboss) I always used my own lamp. Each shift, before going into the mine, it was my invariable custom to test my lamp, by blowing, to make sure the glass was tight. Every fireboss knows the lamps have asbestos washers and many have

expansion rings besides to prevent the breaking of the glass by heat.

The answer given to a recent examination question asking what made a lamp safe, named two essential conditions: 1, The right construction and assembling of the lamp. 2, Proper handling in its use.

PETE BOLAND.

Herrin, Ill.

## Inquiries Of General Interest

### Self-Acting Gravity Plane

Choice of Single- or Double-Acting Gravity Plane—Essential Features on Which Successful Working Depends—Double Tandem Headsheaves Required to Prevent Slipping of the Rope

HAVING seen much valuable information obtained by inquiries through the columns of *Coal Age*, I desire to submit a proposition we have in contemplation in the near future.

At the present time, we are working a seam of coal that outcrops at the tippie. Overlying this coal is another, four-foot seam, outcropping about 900 ft. higher on the hillside. There are some six acres of this upper seam that we want to start to work out at an early date.

The plan that we are considering is to lower the coal from the seam above to the tippie where it will be loaded on the same tracks we are using in working the lower seam. We have in mind a single-track gravity plane extending from the opening in the upper seam down the hill to the tippie.

The grade is sufficiently steep to afford good haulage by the gravity system. What we desire to know, however, is whether it is practicable to use a single-track incline and provide a passing track at the middle of the plane. Or, is it necessary to build a double-track tramway. We wish to avoid that expense if possible.

Dora, Pa. C. M. SHAFFNER, Supt.

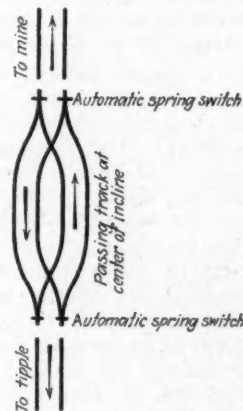
Without more exact data it is only possible to reply to this inquiry in a general way. In the first place, regarding the choice between a single- and a double-track incline, the latter should always be adopted, unless the conditions are such as to entail a large additional expense. Two tracks are safer and more economical in the end than a single-track, where such construction is practicable.

The operation of a single-track gravity plane requires that a passing track be provided at the middle point of the grade so that the descending loaded trip can pass the ascending empties. In the accompanying figure is shown the portion of a single-track, self-acting incline, including the passing tracks at the half-way point. An auto-

matic spring-pole switch at each end of this parting causes the descending loads to take the left-hand track, while the ascending empties pass to the right, as indicated by the arrows.

Much will depend on the inclination it is possible to establish. The grade over the main portion of the plane must be sufficient to provide a gravity pull that will move the trips. It is evident that there must always be an equal number of loaded and empty cars, and these will balance each other. Also, the unbalanced load is the weight of material (coal) being lowered and the net weight of the rope.

When a loaded trip is starting at the head of the plane an equal number



of empty cars, forming the empty trip, is starting from the bottom. At this juncture, the entire length of rope is lying on the plane. As previously stated, the cars are in balance and it is clear that the gravity pull due to the weight of the coal must be sufficient to overcome the gravity pull of the rope and the frictional resistance of both trips and the rope.

To enable a gravity plane to operate successfully, the grade for a short distance at the top of the incline should be somewhat steeper, and that at the foot of the incline similarly lighter,

than the average grade of the plane. This will not only assist in starting but, likewise, help to slow down the speed of the moving cars and bring them to rest at the end of each trip. In other words this feature takes care of the inertia of the system when starting and when stopping trips.

Again, it must be observed that the rope balances itself when the two trips reach the passing tracks. From the time of starting till then, the net weight of rope is on the ascending side of the plane and acts to retard motion; but, after that, to the end of the trip the net weight is on the descending side and acts to assist motion.

Observe that during the first half-cycle the net weight, retarding motion, decreases from a maximum at the start to zero at the midtrip; and during the second half-cycle the net weight, assisting motion, increases from zero to a maximum at the end. The effect of this transfer of the weight of the rope, from the ascending side of the plane to the descending side, is to uniformly accelerate the movement of the system.

In a perfectly designed self-acting plane, therefore, beginning at the head of the plane, for a short distance, there should be provided a slightly steeper starting grade, corresponding to an equal distance at the foot of the plane where the track is almost level. Between these two starting and stopping grades intended to overcome inertia, the grade of the main portion of the track should gradually and uniformly decrease from top to bottom, so as to offset the effect of the transfer of the rope from the ascending to the descending side of the plane.

The movement of the entire system is controlled by a strong brake applied to a brake-wheel mounted on the same shaft as the headsheave or attached to the latter. To allow for the fleet- ing of the rope on the drum and give the necessary arc of contact there are provided two headsheaves set tandem to each other. The rope is made to take as many half-turns about each sheave as is required to prevent the slipping of the rope on the sheaves when the brake is applied.

be the same as that of a double-acting pump, per stroke. Therefore, since the given pump makes  $340 \div 3.4 = 100$  strokes per minute, the single-acting pump must be run at a speed of 100 r.p.m., in order to discharge the same number of gallons per minute as the given pump.

**QUESTION**—If the volume of air proves insufficient when the fan is running at its full capacity what would you do, under such conditions, to improve the ventilation?

**ANSWER**—Clean up the airways; shorten the distance of air travel in every way practicable; straighten the air-courses, avoiding sharp angles and bends wherever this can be done to advantage; and, finally, split the air current, at points where the velocity in the several splits will permit, remembering that the velocity of the air sweeping the working faces must be sufficient to carry away the gases that would otherwise accumulate. It is a matter of first importance to see that all stoppings are made air-tight so as to prevent the leakage of air through them. Again, wherever it is necessary to conduct the air to the faces of rooms or headings, or to cause the current to pass over falls or circulate through abandoned workings, the necessary brattices must be erected for that purpose.

**QUESTION**—Name at least one dangerous practice that is frequently indulged in by the following persons: Miners, motormen, brakemen, bratticemen, trackmen, timbermen and wiremen. Would you allow these practices?

**ANSWER**—Miners are frequently prone to neglect to examine the roof in their working places and set the timbers needed to make it secure, before proceeding to work. They often omit to sprag their coal when mining a shot, and will frequently cut too short a fuse or break off the match of a squib, in order to hasten the explosion.

Motormen are prone to take chances by running at too great a speed; they will often jump off the locomotive while it is going and run ahead to throw a switch or block open a door, without first stopping the trip for such purpose.

Brakemen are prone to take chances in coupling cars or neglect to properly sprag a trip on a down grade.

Bratticemen may fail to give the necessary attention to the proper construction of a brattice; or to extend it near enough to the working face to keep the place clear of gas; or to repair a brattice destroyed by a shot.

Rockmen are prone to overcharge a hole with dynamite or other quick explosive, or fail to retreat to safety when firing a shot in a heading.

Timbermen often fail to sufficiently protect themselves, by setting temporary timbers, when taking down loose top or replacing broken sets of timber.

Wiremen are prone to take chances of being fatally shocked by failing to shut off the current before proceeding to make certain changes or repairs to the wiring system.

## Examination Questions Answered

### Kentucky Mine Foremen's Examination, Lexington, May 30, 1922

(Selected, First-Class Questions)

**QUESTION**—Are there any conditions under which it would not be safe to use a safety lamp? If so, name them.

**ANSWER**—A mine safety lamp is never safe when in the hands of an inexperienced person who does not understand the danger of its misuse. The lamp is not safe if defective from any cause, such as injury to the gauze chimney or the gauze protecting the openings for the entry of air; a dirty gauze owing to the accumulation of soot; or the improper assembling of the parts of the lamp. The lamp is not safe when the gauze becomes heated or the lamp is exposed for too long a time to a body of gas, or when exposed directly to the force of a blower of gas or a sudden rush of air, or carried unprotected against a strong air current. The lamp is never safe when held in an inclined position, or swung backward and forward when being carried from place to place, or permitted to fall.

**QUESTION**—State under what conditions you would consider a mine gaseous.

**ANSWER**—A mine should be classed as a gaseous mine when any portion of it is generating gas in sufficient quantity to be detected on an ordinary safety lamp of approved type. Such

classification, however, does not imply that the mine must be worked with locked safety lamps. It would simply mean that necessary precautions must be adopted to prevent accidents occurring by reason of accumulations of gas. The tendency has largely prevailed, in the past, in coal-mining states, to designate a mine as "non gaseous," until sufficient gas is generated to require the mine to be worked with safety lamps; but the practice is a menace to safe mining.

**QUESTION**—If you have a ditch 2 ft. wide and 2 ft. deep, running full of water, with a velocity of 15 ft. per sec., how many gallons is passing per minute?

**ANSWER**—The sectional area of the ditch is  $2 \times 2 = 4$  sq.ft. Then, assuming an average velocity of 15 ft. per sec., the volume of the flow is  $(4 \times 15 \times 60 \times 1,728) \div 231 = 26,930$  gal. per min.

**QUESTION**—A pump discharges 340 gal. of water per minute and has a capacity of 3.4 gal. per stroke. How many revolutions would a single-acting pump have to make in order to discharge the same amount?

**ANSWER**—Assuming the two pumps are of the same size, the capacity of a single-acting pump, per revolution, will



## Federal Fuel Distributor Establishes Procedure for Getting Emergency Coal—Committees Named

**F**EDERAL Fuel Distributor Spencer has completed the organization of his administration by designating the following:

Samuel Porcher, in charge of railroad fuel; J. N. Snider, for New England and the East; George F. MacGregor, for the West; Le Barron S. Willard, for tidewater coal; C. E. Tuttle for Lake coal. E. M. Durham, Jr., for the Southeast; E. W. Thornley, manager of orders; F. G. Tryon, of the Geological Survey; Lieut. Commander E. A. Cobey, of the Navy; M. J. Gormley, of the American Railway Association; J. C. Roth of the Interstate Commerce Commission; D. R. MacLeod, secretary of the Administrative committee; C. P. White for the Northwest.

**Railway Coal Committee.** B. P. Phillippe, chairman, representing Eastern railroads: E. A. Clifford, representing Western roads: F. H. Fechtig, representing Southern roads: W. G. O'Fallon, representing southwestern roads.

**District committees** to be named in the principal coal producing districts east of the Mississippi River for the purpose of distributing orders from the Federal Fuel Distributor among mines will consist of representatives of the Federal Fuel Distributor, the Interstate Commerce Commission, coal operators and the railroads.

The Federal Fuel Distributor has designated district headquarters as follows:

**Norton, Va.:** All coal districts of Virginia except the Pocahontas.

**Thurmond, W. Va.,** covering New River and joint mines on the Virginian Railroad.

**Bluefield, W. Va.:** Pocahontas, Winding Gulf, New River, Tug River and Virginian coal districts.

**Huntington, W. Va.:** Kanawha, Logan, Williamson, and Big Sandy coal districts.

**Knoxville:** Coal districts in southeastern Kentucky outside of Harlan and Hazard, and all Tennessee mines.

**Louisville:** Harlan, Hazard and Western Kentucky on the Louisville and Nashville and the Illinois Central railroads.

**Birmingham:** Alabama.

The Federal Fuel Distributor announces that coal operators will continue their normal ordinary business, but that this will be gradually encroached upon by priority orders of the Interstate Commerce Commission and finally coal orders placed through the Federal Fuel Distributor for railway purposes and state committees will gradually absorb the total output of mines.

Under plans of the Federal Fuel Distributor, the governors of states will appoint fuel committees and orders from the committees will be sent to the Fuel Distributor at Washington, passed on, and then sent to district committees.

Duties of state organizations appointed by the governors are defined in regulations issued by the Fuel Distributor as follows:

Report at once the consumption of coal in the state, as to utilities, household, industrial and other uses.

Furnish statement showing a list of those who receive priority coal for current use, but not for storage, in the order of emergency of their need; character of coal required, including source from which consumer previously obtained supplies; name of coal operator with whom he does business if in the present producing field; weekly supply needed by such consumer; number of weeks stocks he has on hand.

To set up a single consignee in each state on behalf of all coal shipped into the state on orders from the governor's committee, through the Federal Fuel Distributor. The governor's committee will be responsible for the payment of all coal shipped into the state and will advance to a bank a deposit to cover it, which depository will honor sight drafts with weight certificate, car number, etc., this being practically an f.o.b. sale.

The Governor's committee will distribute the coal made available to it according to the respective needs in the State,

and is at liberty to reconsign or move coal after it reaches points in the state.

The governor will distribute the coal according to necessity as follows:

Public utilities and public institutions, households, industries manufacturing public necessities, and industries in general.

The governors' committee will be expected to secure the co-operation of wholesale and retail dealers in their states, and will be responsible for prevention of profiteering and extortion in the sale and distribution of coal in the states. They will furnish written orders to the Federal Fuel Distributor on forms to be prepared.

Government fuel orders will be given by the co-ordination committee and will pass through the Federal Fuel Distributor to the District Committees.

Shipments of coal by the Lakes to Minnesota, North and South Dakota, northern Wisconsin, northern Michigan and Canada will be through the Ore and Coal Exchange of Cleveland. Cars for such coal on contracts in existence will go through or be approved by the Federal Fuel Distributor to the District Committee. It is planned to establish a regular weekly movement of coal to this trade. The division of this coal between the states or receiving points must be approved by the Federal Fuel Distributor.

The Federal Fuel Distributor further announces that coal operators will continue to function individually with respect to filling their ordinary business or priority orders that may come under the Interstate Commerce Commission order of priority until orders are received by the district committee from the Federal Fuel Distributor supplanting their capacity.

On receiving orders for coal from the Federal Fuel Distributor the service agent of the Interstate Commerce Commission on the district committee will issue an order upon recommendation of the representative of the Fuel Distributor to the railroads to place cars for coal shipment. The order will be sent to the representative of the railroad on the district committee for transmission to the proper official of the railroad for execution. The district committee will specify the mines from which the coal is to be shipped. Representatives of the Federal Fuel Distributor will, subject to a guarantee of payment, which shall be satisfactory to the mine operator, but in keeping with the Hoover fair price, allocate cars to the mines in the district. Representatives of the railroads on the district committee will report to the service agent of the Interstate Commerce Commission the number of cars shipped daily under the orders. The district committees will report to the Fuel Distributor at Washington the shipments made.

The distribution of fuel for railroads will be concentrated in the hands of a railroad coal committee composed of coal buyers from the different railway groups as given above. This committee will meet in Washington, check the needs of the railroads for coal, pass upon applications for emergency coal for railroad use and in other ways co-operate in the execution of the general plan.

### District Committees Named

The personnel of the district coal committees has been announced by the Federal Coal Distributor, as follows:

#### HUNTINGTON, W. VA.

Lt. F. B. Conger, representing Federal Fuel Distributor Coal Operators' Representatives:

##### Williamson Committee:

L. E. Woods, Crystal Block Coal and Coke Co., Welch, W. Va.

G. S. Patterson, Sycamore Coal Co., Vivian, W. Va.

T. H. Huddy, Bally-Sudduth Fuel Co., Williamson, W. Va.

L. E. Armentrout, Borderland Coal Co., Cincinnati, O.

Geo. Bauswine, Jr., Secretary, Operators' Association of Williamson Field, Williamson, W. Va.

##### Northeast Kentucky Committee:

Cadwallader Jones, Marrowbone Mining Co., Ashland, Ky.

C. W. Moorman, Wells-Elkhorn Coal Co., Ashland, Ky.

W. T. S. Hand Consolidation Coal Co., Jenkins, Ky.

Geo. B. Archer, Prestonburg, Ky.

E. L. Bailey, Edgewater Coal Co., Hellier, Ky.  
 C. J. Neekamp, Ashland, Ky., Secretary, Northeast Kentucky Coal Association.  
**Logan Committee:**  
 C. W. Henry, Amherst Fuel Co., Huntington, W. Va.  
 C. W. Jones, Daisy Coal Co., Henlamsen, W. Va.  
 W. P. Neekamp, Elkhorn & Shelby Creek Coal Co., Huntington, W. Va.  
 J. S. Riley.  
 Jas. D. Francis, Island Creek Coal Co., Huntington, W. Va.  
**Kanawha Committee:**  
 Thos. J. Robson, Wyatt Coal Co., Charleston, W. Va.  
 Lake Bobbitt, Fort Dearborne Coal Co., Charleston, W. Va.  
 Max Price, Dickinson Fuel Co., Charleston, W. Va.

#### LOUISVILLE, KY.

Lt. H. G. Patrick, representing Federal Fuel Distributor Coal Operators' Representatives:  
**Western Kentucky Committee:**  
 James E. Palmer, Providence, Ky., Diamond Coal Co.  
 Brent Hart, Madisonville, Ky., Hart Coal Corp., Morton Gap, Ky.  
 Don M. Evans, Earlington, Ky.  
 J. P. Cox, Brevier, Ky.  
 C. F. Richardson, Sturgis, Ky., West Ky. Coal Co.  
 Clarence Martin, Greenville, Ky.  
 A. B. Barnard, C. W. Taylor.  
 Virgil Y. Moore.  
**Harlan County, Kentucky, Committee:**  
 C. B. Wilburn, Crown By-Product Coal Co., Chevrolet, Ky.  
 F. D. Perkins, Perkins-Harlan Coal Co., Harlan, Ky.  
 John Marland, King-Harlan Co., Cincinnati, O.  
 W. B. Whitfield, Harlan Collieries Co., Ages, Ky.  
 W. L. Hammond, White Star Coal Co., White Star, Ky.  
 E. R. Clayton, Harlan, Ky., Harlan County Coal Operators Association.  
**Hazard Coal Operators, Lexington, Ky.:**  
 J. T. Hatfield, Reliance Coal & Coke Co., Cincinnati, O.  
 George Kearns, Reliance Coal & Coke Co., Cincinnati, O.  
 R. A. Hord, Hazard Coal Operators' Association, Lexington, Ky.  
 A. L. Allais, Columbus Mining Co., Chicago, Ill.  
 H. K. English, Kenmont Coal Co., Lexington, Ky.  
 Caryl Robinson, Rockhouse, Ky.

#### KNOXVILLE, TENN.

Lt. Comdr. Lewis Hancock, representing Federal Fuel Distributor Coal Operators' Representatives:  
**Southern Appalachian Field:**  
 George Camp, Knoxville, Tenn.  
 J. F. Pratt, Knoxville, Tenn.  
 E. L. Hampton, Tennessee Consolidated Coal Co., Nashville, Tenn.  
 K. W. Dyas, Stearns, Ky.  
 E. S. Helburn, Middlesboro, Ky., Yellow Creek Coal Co.  
 L. Clark, Nashville, Tenn., Highland Coal & Coke Co.  
 R. E. Howe, Southern Appalachian Coal Operators' Association, Knoxville, Tenn.

#### BLUEFIELD, W. VA.

Lt. Comdr. D. B. Downer, representing Federal Fuel Distributor Coal Operators' Representatives:  
 W. E. E. Koepler, Pocahontas Operators' Association, Bluefield, W. Va.

C. C. Morfitt, Welch, W. Va., Tug River Coal Operators' Association.  
 A. B. Rawn, Solvay Collieries Co., Huntington, W. Va.

#### THURMOND, W. VA.

Lt. Comdr. H. H. Bouson, representing Federal Fuel Distributor Coal Operators' Representatives:  
 W. G. Caperton, New River Coal Co., Charleston, W. Va.

#### NORTON, VA.

Lt. Comdr. E. R. McClung, representing Federal Fuel Distributor Coal Operators' Representatives:  
**Southwestern Virginia Committee:**  
 Webb J. Willets, Norton Coal Co., Norton, Va.  
 Lee Long, Clinchfield Coal Corp., Dante, Va.  
 D. D. Hull, Jr., Roanoke, Va.  
 W. J. Elgin, Richlands, Va.  
 Otis Mouser, Stonega Coke & Coal Co., Big Stone Gap, Va.  
 A. W. Wagner, Virginia Lee Co., St. Charles, Va.  
 Geo. J. Walker, Banner Raven Coal Corp., Drills, Va.  
 M. D. Collier, Appalachia, Va.  
 J. W. Richardson, Splashdam Coal Corp., Splashdam, Va.  
 G. D. Kilgore, Virginia Coal Operators' Association, Norton, Va.

#### BIRMINGHAM, ALA.

Lt. P. P. Powell, representing Federal Fuel Distributor Coal Operators' Representatives:  
 S. L. Yerkes, Birmingham, Ala., Grider Coal Sales Agency.  
 Erskine Ramsay, Pratt Consolidated Coal Co., Birmingham, Ala.  
 A. E. Aldridge, Birmingham, Ala.  
 G. F. Peter, Southern Coal & Coke Co., Boothton, Ala.  
 Hugh Morrow, Birmingham, Ala.

Fuel matters in various states will be under the immediate control of the following:

Alabama—Roy R. Cox, Montgomery.  
 Delaware—Leon Walker, 1020 Church St., Wilmington.  
 District of Columbia—Public Utilities Commission, Washington.  
 Florida—Florida Railroad Commission, Tallahassee.  
 Illinois—Robert M. Medill, Springfield.  
 Indiana—Public Service Commission, Indianapolis.  
 Iowa—Charles Webster, Des Moines.  
 Kansas—Court of Industrial Relations, Topeka.  
 Kentucky—J. Sherman Cooper, Frankfort.  
 Louisiana—John G. O'Kelley, Baton Rouge.  
 Maine—Andrew P. Lane, Augusta.  
 Maryland—Wm. Milnes Maloy, Baltimore.  
 Massachusetts—James J. Storrow, Boston.  
 Michigan—Wm. W. Potter, Lansing.  
 Nebraska—State Railway Commission, Lincoln.  
 New York—E. H. Outerbridge, New York.  
 North Carolina—State Corporation Commission, Raleigh.  
 North Dakota—State Railroad Commission, Bismarck.  
 Ohio—Geo. T. Poor, Columbus.  
 Pennsylvania—Public Service Commission, Harrisburg.  
 Rhode Island—George H. Webb, Providence.  
 South Carolina—State Railroad Commission, Columbia.  
 Tennessee—Wilbur A. Nelson, Nashville.  
 Vermont—Hugh J. M. Jones, Montpelier.  
 Virginia—Major Alexander Forward, Richmond.  
 West Virginia—J. Walter Barnes, Charleston.  
 Wisconsin—Edward Norman, Madison.

## Priority Plan in Middle West Makes Halting Start; Car Supply Continues Bad

THE Middle West's hope for a flying start of the new federal system of coal distribution was bruised during the past week. The plan did not produce results. Priority orders did not absorb the whole flow of fuel, car supply was not much improved, and prices were not generally drawn down to the government level of \$3.50. When the week opened cars made an improved showing. Many a Kentucky mine got more than 75 per cent of what they requested, and everybody felt fairly good. By the middle of the week, however, more than half the mines of the state were down and the same old condition of affairs prevailed. The L. & N. supplied 30 per cent of the demand for cars at the mines along its lines.

Practically all the coal that went to railroads sold at \$3.50 but in many cases a jobbers' commission of 8 per cent was added. The remaining coal, which was of larger volume than the market had expected, sold all through the Midwest region at widely varying prices. In the fields it brought \$6.50@10 and in the markets a shade more than that. Chicago, maintaining its reputation for top prices, saw coal from Western Kentucky selling above \$11.

Illinois suffered a considerable flurry on Friday when Robert M. Medill, state fuel administrator, announced that he interpreted the federal plan to mean that the state was absolutely cut off from all fuel from outside fields. At once the market got excited and Western Kentucky coal hopped from \$9 to \$12. There were all sorts of wild quotations made by greedy brokers running up to \$14, but no sales were made above \$12. The market quieted down to \$10 the next day, however.

Mr. Medill, in a message to *Coal Age* Saturday morning set forth his understanding of the matter thus: "Illinois' supply of coal from outside producing points has not yet been cut off although we have been advised that we must not expect even a large part of our requirements so that states which have no coal resources and which require longer periods of transportation must be afforded a larger ration of the national supply."

It is felt in some quarters that a few Kentucky operators, especially in the western end of the state, are doing what they can to avoid taking priority orders so as to extend the period of \$8 and \$10 coal as long as possible. The first definite complaint of this sort in Kentucky was registered with the state railroad commission by Muscoe Burnett, general manager of the Paducah Water Co., who complained that he had tried to get coal from four or five western operators only to be told all their output was under contract and they could not send him a ton. The case is being investigated.

The new plan has not been in effect long enough yet for a thorough try-out. In Illinois, Mr. Medill is getting his county distribution boards appointed and will aid Governor Small or Acting Governor Sterling this week in the formation of a complete state committee.

In the meantime the coal trade not only of Illinois but of all the surrounding states is anxious for the whole machinery of coal distribution to get into gear. The general uncertainty of things wears hard on nerves already harassed.

A SURVEY OF PRICE SITUATION made last week at the instance of Secretary Hoover developed the fact that 95 per cent of the coal now being produced is being sold within the maximum fixed.



# Illinois Offers Last Year's Wages If Miners Will Agree To Abide By Impartial Arbitration

BY E. W. DAVIDSON

ILLINOIS operators made a positive move last Friday to open their mines. They proposed to Frank Farrington, state president of the miners, that the 92,000 strikers of Illinois go back to work at the old scale until March 31, 1923, agreeing to abide by the findings, in the meantime, of an impartial arbitration board made up of men other than operators.

This is practically the Harding plan rejected by the miners at Washington. Farrington, who was in Chicago when the proposal was drafted, left the city saying he didn't think his men would agree to such arbitration and that anyway he would make no answer to the operators until after International President John L. Lewis' four state conference at Cleveland starting Monday, August 7, is finished.

The Illinois offer, on the eve of President Lewis' Cleveland conference, was generally credited, around Chicago, with being a weapon for Frank Farrington to carry into the Lewis meeting at Cleveland. Just how he might use it was uncertain, but everything about Farrington's procedure has been uncertain for months. The offer, drafted after an all-day meeting of the operators on Friday, August 4, maintains the position the state mine owners have taken all along, but it is the first definite proposal they have given to Farrington.

There was considerable anxiety in the Midwest region over the Cleveland conference, lest Lewis manage to draw to that meeting one or two strip mine owners of Illinois along with a scattering few from Indiana and Pennsylvania together with the majority of the northeastern Ohio operators, and make a deal to open the mines of those eager gentlemen, calling it a four-state basic agreement. Many an operator was free to admit he felt Lewis would be scoring a bullseye if he opened even one or two mines in each state. It would be hard to prevent a rapid disintegration of the operators' ranks after that. However, the organized operators of Illinois declared they doubted if any independent operators of that state would sign up with Lewis. It was known, however, that at least one or two Illinois operators, including an association member from Danville, would attend.

An important question was: Will Farrington break with the international and finally try to make a separate deal for Illinois if Lewis' conference fails? John Watt, secretary-treasurer of the miners' organization for Illinois, and an avowed Lewis man against Farrington, declared in Springfield, Ill., Saturday, that Farrington wouldn't dare try it. "It would mean Farrington's ruin," said he. Watt is the man charged by Farrington with "suffering from an attack of running off at the mouth."

In case Lewis' conference fizzled, western operators said they couldn't expect much of Farrington, for his position in the union, they think, has weakened lately. Instead, they believe there would be nothing left but a forceful move by the government to end the strike. In the meantime, very little coal mining is going on through the strike zone. Michigan has made no success of her plan to dig coal for state institutions, and Indiana, with sterner efforts under arms in a few strip mines, has produced few tons:

The letter of the Illinois operators to Frank Farrington follows:

"We are attaching hereto our reply to the invitation of President John L. Lewis to attend a meeting which he has called at Cleveland, next Monday, August 7, 1922. We believe this letter will be found entirely self-explanatory.

"The proposition referred to in our letter to Mr. Lewis is herewith submitted to you and your associates for your prompt and careful consideration:

"Acceding to and being governed by the request of the President of the United States, we are prepared to at once open our mines for work, paying the wage scale in effect at the expiration of the last contract. And, to avoid possible further disruption of coal production this Fall and Winter when the coal supply will be dangerously short even under the best conditions, we will agree that the old wage scale shall remain effective until March 31st, 1923.

"Immediately upon resumption of operations, the whole matter of Illinois wages and working conditions shall be submitted to a Board of Arbitration composed of citizens of high public standing agreed to mutually or appointed by the President of the United States, no member of which Board shall be either a coal operator or a coal miner,—the findings of such Board to be binding upon both parties and to constitute the wage basis for a period of two years from April 1st, 1923.

"As we have stated in our letter to President Lewis, we cannot believe that the Illinois miners will reject such an exceedingly fair proposal.

"Very truly yours,

"ILLINOIS COAL OPERATORS' ASSOCIATION,  
Rice Miller, President.

"COAL OPERATORS' ASSOCIATION,  
5TH AND 9TH DISTRS.,  
W. K. Kavanaugh, President.

"CENTRAL ILLINOIS COAL OPERATORS' ASS'N.,  
H. C. Adams, President."

The Illinois refusal to attend the Lewis conference in Cleveland and the reasons therefor were set forth by the operators in this letter to Lewis:

"We have your invitation to meet you in conference at Cleveland, August 7th, to negotiate a basic wage scale for the country.

"The Operators of the State of Illinois as early as January, 1922, urged an immediate conference to discuss a new scale of wages to be effective April 1st, 1922. You continually refused to permit such conferences. You have heretofore issued two calls for joint interstate meetings, both of which calls we accepted; but prior to the date of the conference you cancelled the calls.

"Subsequently, at the request of the President of the United States we met you and your representatives in Washington and received from him a definite proposition. The operators of the state of Illinois unanimously and without reservation accepted the President's proposition. You refused.

"In public statements you seek to put the burden of the present critical position of the United States upon the operators, stating that they were responsible for the continued failure to produce coal. We believe that the international officials of the miners' union are entirely responsible for the present situation, especially in the state of Illinois, where the operators have a definite contract in which the miners agreed that there shall be a state negotiation of new wage contract prior to the expiration of the contract expiring March 31st, 1922. Through your refusal to allow this conference the present condition in the state of Illinois has been brought about.

"The public, as well as yourself, are fully aware of the fact that so far as Illinois is concerned, your national and state organizations are in flagrant violation of your contract with the operators of this state.

"By reason of the published refusals from practically all other unionized districts to attend your suggested meeting, it is clear that the conference cannot be in any sense representative or a proper basis for determination of wage scales to apply throughout the country. It will be approximately only the equivalent of your dealing with a portion of the state of Ohio and possibly a few scattered operators of small tonnage from other states.

"It is universally recognized that the old Central Competitive Field method of negotiation has been permanently outgrown and discarded as a practical method of determining wage scales; your own action in sending invitations to this meeting to a number of individuals not parties to the old Central Competitive Field organization violates former Central Competitive Field procedure and acknowledges that you yourself recognize and are following a new course. For these reasons no representative of the Illinois Operators' associations will be present in Cleveland on Monday, August 7.

"Recognizing the great seriousness of the present situation and the threat to public health and welfare that will be caused by further stoppage of coal production, and because of the futility of our former repeated acceptance of invitations to national or interstate meetings which have failed of results, Illinois operators are to-day offering to the miners of Illinois their thought of a proper solution of the totally unwarranted deadlock that exists in this state.

"We cannot believe that the Illinois mine workers will reject such an exceedingly fair proposal as we have suggested and by their refusal continue to inflict great and needless suffering on themselves and on all other citizens."

"Illinois operators do not now and have not at any time favored even the temporary payment of the enormous wage rates now offered to their workmen," W. K. Kavanaugh of St. Louis, president of the 5th and 9th districts of Illinois, stated, "but because of the offer of the President of the United States we have accepted such basis of payment, contingent, however, only upon the acceptance by the miners of a fair, impartial arbitration and determination of a wage rate subsequently to be paid."

Illinois operators, Mr. Kavanaugh said, are perfectly willing to accept responsibility for not attending the Cleveland meeting "rather than be parties to a betrayal both of the public and its agents, the government, through a surrender at this time of the principles which they have admittedly at great loss contended for."

## Mine Fatalities in June Higher in Number And Ratio to Output Than in May

ACCIDENTS at coal mines in the United States during June, the third month of the strike, resulted in the loss of 92 lives, according to reports received by the Bureau of Mines from state inspectors. Fatalities not resulting from the normal hazards of mining are not included in this number. Revised figures covering the present strike period show 78 fatalities in April and 79 in May. The increased number of accidents in June as compared with May was confined largely to the bituminous mines of Pennsylvania and West Virginia. Based upon a production of 22,393,000 tons of coal in June, as reported by the U. S. Geological Survey, the fatality rate for the month was 4.11, as compared with 3.89 for May and 4.94 for April of the present year and 4.03 for June, 1921.

During the past nine years (1913-1921) an average of 203 men have lost their lives by accidents at coal mines during June. The output of coal has averaged 47,280,000 tons, thus indicating a fatality rate of 4.29 per million tons as representative of the month of June over the 9-year period. It will be noted that the rate for June, 1922, while somewhat higher than that for May, was lower than the rate for April, the first month of the strike, and also lower than the average rate for June for the nine-year period between 1913 and 1921.

During the first half of 1922 829 men were killed by accidents at coal mines as compared with 1,001 during the first six months last year, a decrease of 172 fatalities, or 17 per cent. The output of coal has declined 14 per cent, the fatality rates for the two six-months periods being 4.13 for 1921 and 3.97 for 1922 per million tons.

Gas and dust explosions continue to be the only conspicuous class of accidents showing a higher fatality rate for 1922 than for the first six months last year.

No single accident in June killed as many as five men. The record for 1922 to date shows 7 major disasters in which 82 lives have been lost, as compared with 3 disasters and a loss of 17 lives during the first half of 1921.

## Two Miners, Both Americans, Each Shoot And Load About Fifty Tons a Day

THE Standard Island Creek Coal Co. has operations at Cora and Taplin in West Virginia, the two places being about fifteen miles apart. During the last half of June it conducted a loading contest between its Loma mine No. 3, at Taplin, and Cora mine No. 2, at Cora, offering a cash prize to the loader who produced the largest quantity of coal.

Jerry Dunn, an American miner, working at Loma No. 3 during the last half of June, 13 working days, loaded a total of 469 mine cars of a capacity of 1.4 tons per car—that is 656½ tons, or a trifle over 50.5 tons per shift. He worked in a double-track room 36 ft. wide with coal 48 in. thick. The mine cars stand 27 in. above the top of the rail. The only assistance he had of any kind was the use of an electric coal auger to drill about 25 per cent of the coal loaded; otherwise he did all of his drilling by hand, shooting and loading the coal without assistance. Mr. Dunn is 6 ft. 2 in. tall, being thus decidedly above the normal height of men generally.

William Smith, an American miner, working at Cora mine No. 2, during the same period loaded 459 mine cars of capacity of 1.3 tons per car—that is 596.7 tons or 45.9 tons per shift. This coal was loaded from two entries each 18 ft. wide the coal being 46 in. thick. Here also the mine car stands 27 in. above the top of the rail. The only assistance Mr. Smith had was the use of an electric coal auger for drilling approximately 25 per cent of the coal loaded; otherwise he drilled the coal by hand, shot it and loaded it into the cars. Mr. Smith also is above medium height, being 5 ft. 11 in. tall.

It will be seen that each of these men approximated a 50-ton railroad car per working day. F. J. Bailey is superintendent in charge of Loma Mines 1, 2 and 3, at Taplin, and E. C. Pirrung is superintendent in charge of Cora Mines 1 and 2, at Cora. Our informant is A. W. Fay, the manager of the coal company. It will be noted that these miners received about 36 cars per day—some service.

COAL-MINE FATALITIES DURING JUNE, 1922, BY CAUSES AND STATES  
(Compiled by Bureau of Mines and Published by Coal Age)

State	Underground										Shaft				Surface					Total by States								
	Falls of roof (coal, rock, etc.).	Falls of face or pillar coal.	Mine cars and locomotives.	Gas explosions and burning gas.	Coal-dust explosions including gas and dust combined.	Explosives.	Suffocation from mine gases.	Electricity.	Animals.	Mining machines.	Mine fires (burned, suffocated, etc.).	Other causes.	Total.	Falling down shafts or slopes.	Objects falling down shafts or slopes.	Cage, skip, or bucket.	Other causes.	Total.	Mine cars and mine locomotives.	Electricity.	Machinery.	Boiler explosions or bursting steam pipes.	Railway cars and locomotives.	Other causes.	Total.	1922	1921	
Alabama.....	1		1										2						1						1	3	5	
Alaska.....																										0	0	
Arkansas.....																										0	0	
Colorado.....	2			1									3												3	5	5	
Illinois.....				1		1							2												2	19	6	
Indiana.....																									0	0	0	
Iowa.....																									0	0	0	
Kansas.....																									0	0	0	
Kentucky.....	2								1				3			1		1							4	14	1	
Maryland.....																									0	1	0	
Michigan.....																									0	0	3	
Missouri.....																									0	1	1	
Montana.....																									0	0	0	
New Mexico.....	1												1												1	1	1	
North Dakota.....																									0	0	0	
Ohio.....									1				1										1	2	3	4	7	1
Oklahoma.....																									0	0	0	
Pennsylvania (bituminous).....	10	5	3								1		19						1	1			1	3	22	23	23	
South Dakota.....																									0	1	1	
Tennessee.....	2												2												2	0	0	
Texas.....																									0	0	0	
Utah.....																									1	0	0	
Virginia.....	3												3						1					1	3	3	2	
Washington.....		1		2									3												3	3	2	
West Virginia.....	19	1	10			1			6		1		38						1				1	3	41	31	31	
Wyoming.....							1						1												1	1	1	
Total (bituminous).....	40	7	14	4		2	1	7	1				78			1		1	2	2	2		2	3	11	90	125	
Pennsylvania (anthracite).....													1												1	2	45	
Total, June, 1922.....	40	7	14	5		2	1	7	1				79			1		1	2	2	3		2	3	12	92	170	
Total, June, 1921.....	78	10	25	5		13		15		1			154	2	2	3		7	3	2	1			3	9	170	170	



# Washington Puts Burden of Coal Distribution on States— Hopeful That Cleveland Conference Will Start Mines

BY PAUL WOOTON

Washington Correspondent of *Coal Age*

Washington, Aug. 8.—The pinch of coal shortage is becoming severe in several portions of the country. Spokesmen for the fuel distributor stated today that great pressure is being brought from the New England states and by states in the Northwest and in the Middle West. Senator Lenroot of Wisconsin saw the fuel distributor this morning and in no uncertain way said that something must be done to start shipments to northern Lake Michigan points, being out of reach of all-rail movement from Kentucky. One of the most active protests considered by the fuel distributor today came from the Middle Western states to look after their canning industry.

Large numbers of locomotives are being moved from the North to Southern coal fields, it was stated. Some railroad shortage of fuel is reported in the Middle Atlantic region.

Secretary Hoover stated today that failure to observe the price maximum applied only to an insignificant portion of the tonnage being produced. No increases have been allowed in the maximum price, he stated, in those districts where the 1920 wage scale has been put into effect. He emphasized that the price agreement is for the period of the strike only, but he said the settlement of the strike will not necessarily take the lid off of prices.

SOME further move by the President in the coal strike is expected. Events since he sent the operators home to produce coal are thought by many to have demonstrated that they will be unable to produce any appreciable amount of coal in the highly organized districts. On the other hand the mine workers have failed to accomplish anything constructive. In view of that situation many believe the President very shortly will take steps intended to force arbitration.

The failure on the part of the operators in the union districts to secure production has been a great disappointment to their sympathizers. It is true that there has been some increase in production in the Pittsburgh district and in the old non-union part of Pennsylvania, but the aggregate of that output is such as to have a very feeble influence on the situation. The small production coming from striping operations in Illinois and Indiana has decreased. There is no production in Iowa and there has been no increase in the output of Missouri, Kansas, Oklahoma and Arkansas. Little is expected to result from state operation of mines and very little is being claimed as to the possibilities of production by such methods. As a result it is fully expected that the President will call in again the representatives of each party to this controversy and tell them that they have failed to make good and that the settlement must be placed in other hands.

A possible outcome of the Cleveland conference called by John L. Lewis, according to speculation here over the week end, is that an agreement can be reached whereby eastern Ohio can resume operations on the 1920 scale and with all the other demands of the miners put into effect. Such an arrangement might also be made at isolated operations in other districts in the central competitive field. If that should be done there soon would be a general resumption on that basis, some predict.

As the control over distribution progresses, it is very evident that the individual states under this plan have to shoulder most of the work and most of the responsibility. The task assigned to the Federal Government of apportioning current production among the states and among the railroads is easy in comparison. The thing worrying Washington is whether or not the states can measure up to the task assigned to them. To distribute coal in an intelligent

manner in any state is a technical task of great complexity. Large organizations will have to be set up and heavy expenses incurred. The fear is expressed that the states will not be equal to the task and the whole plan may have to be revised.

Despite the experience the railroads have had with service orders in the past, each road has put service order 23 in effect in its own way and as a result much confusion has been caused. This became so bad that the Interstate Commerce Commission on Aug. 4 was forced to issue an amendment to the order.

The matter of re-establishing restrictions on coal prices in Pennsylvania was the subject of a conference held at Washington on Aug. 7, between representatives of the operating mines of Pennsylvania and Secretary Hoover of the Department of Commerce and Federal Fuel Distributor H. B. Spencer. The purely voluntary price arrangement of June 1, of from \$3.25 to \$3.50 per ton, broke down two weeks ago, partially due to the fact that some coal producing districts refused to co-operate in the voluntary agreement at that time, and partially due to conditions brought about by the railways offering \$1.50 per ton above the fair price for coal in the districts which did agree. Many coal operators in the districts where voluntary agreement was made have held to the fair price, but other districts are asking as high as \$7 to \$8 a ton.

The operators proposed that a new fair price should be fixed at a somewhat higher level than that of June 1, in order to allow for increased working expenses due to car shortages and partial operation of mines. It was considered by the administration officials that, inasmuch as the bulk of present production from Pennsylvania is consumed in that state and is, therefore, not a consequential export factor in interstate commerce, the Pennsylvania state authorities should participate in any arrangements. Moreover, while enforcement of price restrictions under the new plan approved by the attorney general has been made fairly effective in states whose coal predominantly enters into interstate commerce, any enforcement beyond purely voluntary action in coal locally produced and sold must rest upon the state authorities. A meeting between the Pennsylvania state coal committee appointed by Governor W. C. Sproul and the administration officials has been arranged for Wednesday, to consider the matter.

While there has been an improvement during the last week in transportation service, there is a feeling that the bond of sympathy between the striking shopmen and the other railroad orders is sufficiently strong to make it certain that transportation efficiency is kept at a low ebb. Just at this time a shortage of power is beginning to be felt. Engine employees are in a position, without involving themselves, to contribute easily to further failures of locomotives. There is also the serious matter of boiler inspection. Strike sympathizers in high places are seeing to it that there is no laxity in the Government's inspection. There is now talk among men in the train service of refusing to take out trains on the ground that the state of the equipment makes it unsafe. The trouble with the workers on lake boats is said to have its real basis in the desire to contribute something to the success of the strike. Among the various labor organizations which have to contribute to the transportation of coal, it is very clear that they are in a position to keep transportation badly tied up for an indefinite period.

## AMENDMENT NO. 1 TO SERVICE ORDER NO. 23

At a session of the Interstate Commerce Commission, division 5, held at its office in Washington, D. C., on the fourth day of August, A. D. 1922.  
It is ordered, That paragraph numbered 7 of the said Service Order No. 23 adopted July 25, 1922, be, and it is hereby, amended

and supplemented to read as follows effective on and after Aug. 5, 1922:

7. That in the supply of cars to mines upon the lines of any coal-loading carrier, such carrier is hereby authorized and directed, to place, furnish, and assign such coal mines with cars suitable for the loading and transportation of coal in succession as may be required for the following classes of purposes, and in following order of classes, namely:

**Class 1**—For such special purposes as may from time to time be specially designated by the commission or its agent therefor. In designating special purposes under this reservation, the commission or its agent will designate the class of relative priority, as Class 1, Class 2, Class 3, Class 4, or Class 5, which such special purpose or particular shipment or shipments shall receive.

And subject thereto in order of priority:

**Class 2**—(a) For fuel for railroads and other common carriers, and for bunkering ships and vessels; (b) for public utilities which directly serve the general public under a franchise therefor, with street and interurban railways, electric power and light, gas, water and sewer works; ice plants which directly serve the public generally with ice, or supply refrigeration for human food stuffs; hospitals; (c) for the United States, state, county, or municipal governments, and for their hospitals, schools, and for their other public institutions—all to the end that such common carriers, public utilities, quasi-public utilities, and governments may be kept supplied with coal for current use for such purposes, but not for storage, exchange, or sale; (d) bituminous coal which has passed over screens of four inches or larger opening, coke, and anthracite coal, to be shipped to retail dealers for household use.

**NOTE:** It is not intended by this paragraph to give any priority as between clauses a, b, c, and d hereof.

And subject thereto in order of priority:

**Class 3**—(As to each coal-loading carrier which reaches mines in Pennsylvania, Ohio, West Virginia, Kentucky, Tennessee, and Alabama.) For bituminous coal consigned to any Lake Erie port for transshipment by water to ports upon Lake Superior.

And subject thereto in order of priority:

**Class 4**—(As to all such common carriers by railroad.) Coal for the production and manufacture of foodstuffs and medicines and for the manufacture of containers therefor, for daily use but not for storage, exchange, or sale.

And subject thereto in order of priority:

**Class 5**—Other purposes.

No coal embraced in Classes 1, 2, 3, or 4, shall be subject to reconignment or diversion except for some purpose in the same class or a superior class in the order of priority herein prescribed.

For the more prompt and effectual administration during the present emergency of the authorization, directions, and requirements of this paragraph No. 7, the following persons are designated and appointed as agents of the commission, with authority to give directions as to car service and to the matters referred to in paragraphs (15) and (16) of section 1 of the interstate commerce act, and referred to in this paragraph No. 7, viz: John C. Roth, Director, and E. H. DeGroot, Assistant Director, Frank C. Smith, Chief Inspector of the Bureau of Service of the Commission, and S. J. Mayhoad, B. S. Robertson, C. C. Semple, W. L. Barry, O. S. Reynolds, H. M. Priest, J. B. Ford, and the directions so given by them shall be regarded as directions of the commission.

Detailed instructions have been sent to the state governors by the federal fuel distributor so as to provide a uniform method of handling the work. Fuel Distributor Spencer has prescribed a form which is to be followed by the governors in making application for coal. The form calls for the name of the applicant; the point at which the shipment is to be delivered; the name of the delivering railroad; the purpose for which the coal is to be used; the quantity, grade and size of coal; the consignee's average daily consumption; the consignee's present stock; the name of the firm with which the applicant has a contract; the district from which coal ordinarily is supplied and the name of the bank which will guarantee payment when the coal is shipped.

Another form has been devised on which the district committees will report on orders placed. The governors' committees are requested to apply for coal produced in other states through the federal fuel distributor only, and not to order coal from district committees or from producers outside their own state.

Mr. Spencer emphasizes in his letter to the governors that there is no anthracite available for distribution; that emergency coal may be had only for current use and not for storage; that emergency coal may be had only for the essential purposes outlined by the Interstate Commerce Commission and that all coal will be placed f. o. b. railway cars at the mines at the fair prices for that district approved by Secretary Hoover.

**CONFERENCE WAS HELD DURING THE WEEK** with the President, Secretary of Commerce Hoover and the Federal Fuel Distributor by Governor Miller of New York and E. H. Outerbridge and D. L. Cooke of the Governor's advisory coal committee, to acquaint themselves with the plans of the administration to distribute coal. The New York authorities expressed a willingness to co-operate with the government in the coal situation.

**RAILROAD LABOR IS FINDING OUT** that its goal is not within striking distance—*Washington Post*.

## Davis Wishes Cleveland Conference Success

**S**ECRETARY of Labor Davis was the only government official in Washington to discuss publicly the call of the miners' union of bituminous coal operators for a conference at Cleveland Aug. 7. Mr. Davis urged the operators to confer and settle the strike. This is in line with the policy of the Secretary of Labor who all along has favored a national wage conference.

"Methods which have settled other coal strikes have so far failed to settle this one," said Secretary Davis. "So the return to the method of the joint conference meets with my hearty approval. I hope that the conference will be so representative of the mining industry that an early resumption of mining will be assured. A speedy resumption, even now, will make it difficult to avoid hardship and suffering this winter. I am quite sure that the participants at Cleveland will fully realize the serious economic situation confronting the country and that they will lend every effort to reach a quick settlement. The Department of Labor will lend any assistance in its power to hasten the desired adjustment. Get together, dig coal, relieve suffering and hasten the prosperity that is awaiting us."

## Will Somebody Pay the Bill for Enforcing Justice on the Murder Mob of Herrin?

**T**HE attorney general of Illinois cannot see that justice is meted out in Williamson County to the men who slaughtered 19 non-union workmen near Herrin, June 22, because he has no funds with which to do it. In a message to *Coal Age* Saturday morning he said: "My office is without funds because of the vetoing of my appropriations by Gov. Small. The Illinois Association of Commerce and a number of civic bodies have talked about raising funds but thus far it is all talk. No money has been turned over to me."

In an interview printed in the Chicago Journal of Commerce, Mr. Brundage declared his office is doing all it can on the Herrin matter with the limited finances at its command, but this small accomplishment amounts to little or nothing because the state cannot get co-operation from the officials of Williamson County. Mr. Brundage doubted whether a jury to try anybody charged with the murders could be impanelled in that county, but he suggested that the state constitutional convention, which reconvenes in a couple of months, might change the bill of rights to permit such a case as this to be tried outside the county in which the crimes were committed. The attorney general charges Gov. Small with part of the responsibility for the Herrin massacre because the governor and other state officials did not take any steps to prevent it even though they had advance information that trouble was brewing.

Frank Farrington, president of the Illinois miners, has publicly declared that in case any union miners are charged with having any part in the Herrin affair, the full strength and resources of the union will be used in their defense. He prophesies that if prosecutions start, many an innocent man will be drawn in simply because he is a member of the union and that unless every union man has adequate defense, he may be railroaded merely to satisfy the desire for vengeance.

## Connellsville Mines Increase Output

**I**N the Connellsville coke region the past week has seen considerable increase in output at most all mines that are working; otherwise there has been no change. The strikers are still attacking the workers whenever they have a chance. During the past week one man was attacked in Brownsville and one between Brownsville and Linn. In both cases some of the attackers were arrested by the state police.

In the Pittsburgh union field three Washington County mines are operating non-union. The Lincoln Gas Coal Co., at Lincoln Hill, near Washington, and the Acme Coal Co., at Wilson, near Cokeburg, are producing about ten cars a day; and the Montour No. 4 mine of the Pittsburgh Coal Co. is producing one to two cars a day.



## Illinois Refuses to Meet Lewis at Cleveland Under Any Pretext—Some Favor Crews' Plan

Chicago, August 8—Operators in session all day Tuesday, Aug. 8, in Chicago reaffirmed their position favoring return to work of all striking miners at the old wage scale pending arbitration, which they were ready to accept either nationally or by states. This was set forth in a message sent to President Lewis of the miners at his Cleveland conference which at the moment was marking time under a pretense of waiting for Illinois and Indiana to come in.

The operators did not alter their firm stand to any degree but they did frankly ask Mr. Lewis whether he wanted them to talk with him on the basis of their proposal. Then they adjourned until Wednesday at 2 p.m. giving him a chance to answer. As an organization they have not been formally invited to Cleveland.

The main effort of Illinois was to secure arbitration of an unbiased effective sort and they were willing to agree even to the high wages of last year in order to get it.

The operators' only statement at the end of the session was this:

"The conference which Mr. Lewis so desperately seeks at Cleveland is not to negotiate a new wage scale or to accept President Harding's recent offer of arbitration. It is only an offered opportunity provided by Mr. Lewis for the formal surrender of all those operators from any and every part of the country who desire to sign any kind of a contract that may be offered.

"With only 49,000,000 tons or less out of an annual output of 500,000,000 willing to co-operate with Mr. Lewis in this further eleventh-hour effort to establish a national wage conference or to revive the discarded Four-State method of bargaining, Mr. Lewis is fully aware that he may not safely tempt public sentiment and welfare by attempting to arbitrarily take any official action with such a small portion of the whole tonnage, hence his anxiety to secure voluntary additional participation.

"This is clearly indicated by the fact that a substantial portion of the very limited tonnage represented at yesterday's Cleveland meeting was recruited from fields not heretofore participating in the so-called Central Competitive conference.

**C**OMpletely supplanting interest in the original meeting, called by John Lewis for Cleveland on Aug. 7, to negotiate a Four-State contract, the so-called Crews-Glasgow plan for settlement of the soft coal strike entered the arena on Tuesday morning. This plan, according to unofficial reports, the text not having been released when this issue of *Coal Age* went to press, provides for immediate resumption of mining at the wages and under the terms of the contracts in effect on March 31, just prior to the strike. This arrangement would continue in effect until the end of next March, and would reinstate the check-off and preserve the *status quo* of last year.

The second step in the plan provides for an advisory committee or commission, one-half operators and one-half mine workers, to be appointed in the last half of September to which is to be delegated the task of making a study of the soft coal industry and setting up recommendations as to the best way of negotiating future wage agreements. This committee, it is understood, would take the place of the commission that President Harding has been proposing to accomplish the same ends. The difference would be that in the one case the entire matter is retained within the industry and in the other the government would be a party. A further difference is found in the fact that the plan now proposed has no representative of the public, whereas the operators had made strenuous representations to the President that his commission should have nothing but public men on it.

This committee would be entirely advisory and its finding would in no way bind either party. This, it is pointed

out, is desirable because the only finding that the miners ever accept are those of joint conferences, they having rejected at least in part the arbitration awards of the last two governmental commissions. The memorandum of the plan, it is understood, specifically provides that in making its recommendations the committee shall take into consideration the competitive conditions surrounding each producing district as well as the necessities of the mine workers.

Wage rates would be recommended by the committee, it is reported, and the body would have authority from the signatories to make a complete and searching inquiry into all phases of the industry, looking to increasing the efficiency of operation and the betterment of working conditions. Particular emphasis is to be placed on the necessity of developing within the industry a proper spirit of responsibility to the public. Should the operators or miners not be able to agree on their respective members of the committee, the President will be requested to fill the vacancies.

The plan is reported to have the unqualified support of John Lewis and to be acceptable to Mr. Ogle, the president of the National Coal Association. The original draft is stated to have been prepared by Colonel Ralph Crews, a New York lawyer who has been prominent in coal matters for many years. He represented the operators of the Central Competitive Field in the hearing before the Robinson Coal Commission in 1920. He enlisted the help of Mr. Glasgow, a Philadelphia lawyer who has been the general counsel for the United Mine Workers in recent months, and together they got Mr. Ogle and Mr. Lewis together for a consideration of the plan. It was the knowledge that he had this plan to spring on the meeting on Wednesday of this week that is reported to have caused the sudden adjournment of the original meeting in Cleveland on Monday. The two meetings, those who are in touch with the situation are careful to point out, have no connection.

Commenting on the plan on Monday night, Mr. Ogle stated to the press that it was of such character that all who were concerned would be obliged to give it careful consideration. As this issue of *Coal Age* goes to press there have been no official announcements from the operators as to whether they would accept it. Illinois and Indiana producers met on Tuesday to give it consideration. The representatives of the Pittsburgh producers advised *Coal Age* on Tuesday afternoon that they would not participate and most certainly would not meet the miners in Cleveland. Others have informally expressed approval, while some are holding off.

### Southern Ohio Operators Decline to Meet At Cleveland for Four-State Agreement

**O**PERATORS in the southern Ohio field affiliated with the Southern Ohio Coal Exchange have refused to join the proposed conference of miners and operators at Cleveland Aug. 7. This was made known definitely Aug. 3 when W. D. McKinney, secretary of the Southern Ohio Coal Exchange, sent a telegram to John L. Lewis, national president of the miners' union. Among other things in the telegram were: "The method of negotiating a basic wage agreement in a four-state meeting has been challenged in the courts. Almost the entire coal industry has taken the position that it has proven entirely inadequate in meeting the changed economic conditions of the country. The coal industry is controlled by the states and every law relating to the production of coal has been enacted by the states. The federal authorities, recognizing this, have placed the responsibility of producing coal on the several states where coal is mined. Operators and miners in states and districts should meet and solve their own problems."

## Lewis' Four-State Meeting Draws Small Attendance Outside Ohio—No Action Taken Monday

THE original Cleveland conference, called by John L. Lewis, of the United Mine Workers, adjourned shortly after meeting Monday, Aug. 7, until Wednesday of this week. Operators not present were thus to be given time to reach the conference, it was stated. The real reason for the adjournment, however, it is generally understood, was to take under consideration the Crews-Glasgow plan for settlement of the strike. The original meeting—the attempted Four-State conference—was held in abeyance to see what would happen to the proposed Crews-Glasgow scheme.

Operators present on Monday, according to various estimates of the union leaders, represented about 30 per cent of the bituminous coal tonnage of the old Central Competitive Field. Among those also present were mine owners from northern West Virginia and a sprinkling from outlying districts. A joint body was organized, of which Michael Gallagher of the Pittsburgh Vein Operators' Association was made chairman, William Greene, secretary of the miners' organization was elected secretary, with W. L. Robison of the Y. & O. Coal Co., assistant secretary.

Mr. Gallagher and Mr. Lewis made this joint announcement following the meeting, which lasted but a few minutes:

"It was agreed that the conference, after being organized, recess until 3 o'clock Wednesday afternoon. This action was taken in the belief that other substantial interests would announce their participation in the conference at that time."

Because of the various matters involved in the situation, Mr. Lewis refused to make further comment.

The plan and purpose of the meeting called on Monday, according to all reports, was to sign up enough operators from the western Pennsylvania, Illinois and Indiana fields, which, together with the solid block of eastern Ohio tonnage, would make sufficient showing to warrant the United Mine Workers in saying that they had a Four-State contract. The strategy of the union is to get mines started in every district even though the operator's associations refuse to participate. By this system, which is an old one, the ranks of the operators would be broken first in a small way, and, later, as time passed, other operators, unable to withstand the temptation of producing coal on a high-priced market, would sign up with the union. It was argued in Chicago this week, for instance, that if Lewis could get three or four mines open in Illinois he could increase the tonnage and eventually win over the state.

On Friday, Aug. 4, Illinois operators made a proposal to the mine workers quite independent of the suggestions coming from Cleveland, (see p. 215 this issue). They held a meeting on Tuesday, Aug. 8, to consider the invitation of Mr. Ogle and John Lewis to meet in Cleveland on Wednesday to consider the so-called Crews-Glasgow plan for settlement of the strike in all the soft-coal fields. At the same time and for the same purpose the Indiana operators were meeting in Terre Haute.

"The operators of Illinois are perfectly willing to accept the responsibility for refusing to attend the Cleveland meeting rather than be parties to a betrayal both of the public and its agents, the government, through a surrender at this time of the principles which they have admittedly at great loss contended for. This strike has been the most unusual in history in one particular," according to prominent Illinois operators. "Mr. Lewis has stubbornly refused for seven months to discuss or allow to be discussed between the operators and miners the issues common to industrial activity, i.e., wages and conditions of employment. To the contrary he has steered for chaos, from the beginning, demanding the one condition—that three and one-half states of the thirty coal producing states in the country should meet as one unit and determine wage rates that would be paid throughout the entire country."

"The situation of public distress so eloquently portrayed by Mr. Lewis is that which he forecasted early this year for calling this strike and at a time when coal throughout the United States was largely selling below cost of production."

"Nor is there any indication in his latest call of any willingness to recede from the original demands of his policy committee—a six-hour day five days per week, which reduces the physical capacity of the mines of the country 25 per cent. There is no acknowledgment that the arbitration offer of the President of the United States through an impartial commission is at all acceptable."

"As an evidence of the extreme extent of the offer made by the Illinois operators to induce miners to resume work, and for them to establish and give definite evidence of their fairness in submitting to arbitration, we present herewith a comparison of the average wage scale paid in ten Eastern non-union fields now producing coal, and the scale posted on July 20th at the mines in western Pennsylvania, and on the basis of which tonnage is being produced to meet 40 per cent or more of the requirements of the country."

"Illinois operators do not now and have not at any time favored even the temporary payment of the enormous wage rates now offered to their workmen, but because of the offer of the President of the United States, we have accepted such basis of payment contingent, however, only upon the acceptance by the miners of a fair, impartial arbitration and determination of a wage rate subsequently to be paid."

Below is given a direct comparison by classification of wages paid since July 20, 1922 and to continue until January 1, 1923, at the Pennsylvania mines now being operated under the protection of the Militia of that state, also average wages paid by ten non-union coal producing fields, with the wages demanded by Illinois miners.

No "checkoff" in behalf of the mine workers organization is being made by the Pennsylvania operations now operating under the scale here given:

	Pennsylvania	Non-union	Demanded
	Per Ton	Average	by Illinois
Tonnage Men	Per Ton of 2,000	Pounds	Pounds
Pick mining—thin vein.....	\$8.8764	....	\$1.17—\$1.69
Pick mining—thick vein.....	.7911	....	1.08
Cutting—thin vein.....	.1260	....	No scale
Loading—thin vein.....	.5740	....	No scale
Cutting—thick vein.....	.1088	.1071	.151
Loading—thick vein.....	.5343	.4732	.851
Day Men		Per day of 8 hours	
Motormen.....	5.10	4.68	8.04
Motormen helpers.....	5.00	4.08	7.53
Skilled wiremen.....	5.00	4.68	8.04
Wiremen helpers.....	4.75	4.00	7.50
Track layers.....	5.00	4.56	7.50
Track layers, helpers.....	4.75	4.16	7.25
Bottom eagers.....	5.00	4.28	7.50
Drivers.....	5.00	4.28	7.50
Trip riders.....	5.00	4.28	7.50
Water and machine haulers.....	5.00	4.08	7.50
Timber men, where employed.....	5.00	4.08	7.50
Pipemen for compressed air plants.....	4.92	4.68	7.41
Trappers.....	2.65	2.64	4.59
All other inside labor.....	4.75	4.08	7.50
Dumpers.....	4.42	Outside labor	Outside labor
Ram operators.....	4.60	From \$2.48	from \$6.86
Pushers.....	4.18	minimum to	minimum to
Trimmers.....	4.36	\$4.16	\$7.25
Car cleaners.....	4.10	....	....

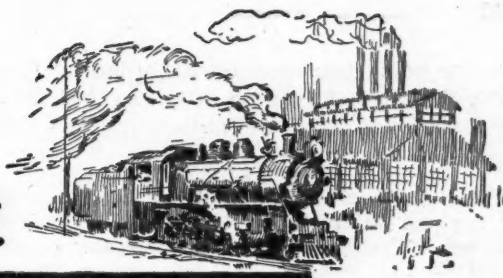
### Fairmont Not Invited to Cleveland

THAT northern West Virginia associations were not to be a party to the Cleveland coal conference was the announcement made during the first week of August. It was stated that the Monongahela Association had received no invitation to attend the conference and that if any northern West Virginia operators attended the conference, they did so as individuals and not as representatives of the association. The conference at Cleveland was regarded by many operators as more of an effort to strengthen the morale of the striking miners than as a bona fide effort to reach an agreement and of course it had its effect on strikers who were disposed to cry quits and go back to work.





# Production and the Market



## Weekly Review

**D**EMAND has eased off a trifle in the past week. There is, of course, no dearth of orders for all the coal that is being mined, but there has come an abatement in the rush as buyers prefer to await developments of the Cleveland conference between union officials and operators representing parts of the old Central Competitive group. The cessation of feverish buying has been accompanied in some instances by curtailed industrial activity and further efforts toward fuel conservation by utilities and carriers. In some sections the shortage is now acute; this is responsible for many Lake vessels tying up because of no bunkers and shortened operating schedules at steel mills in the Youngstown district.

Railroads are functioning better, production has increased slightly, and while congestion of loads is still the main bar to heavier non-union production, the accumulated tonnage on wheels is slowly being untangled and sent to destination.

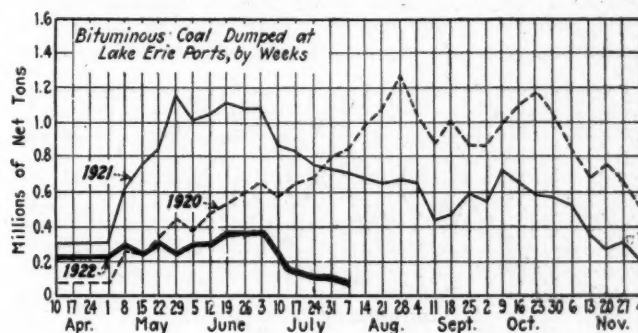
### SPOT COAL MOVES AT MORE REASONABLE PRICES

Coal Age Index of spot bituminous prices dropped 45 points to 511 on Aug. 7. This corresponds to an average mine price of \$6.18, as compared with \$6.73 on July 31. Buyers who must have coal are paying gilt-edged prices for it, unless they are fortunate enough to be lined up with connections who are using the Hoover price as a basis of sale. The list of operators in this category is growing rapidly, however, and in the Midwest the Hoover level may be considered the minimum price of today, with the range continually narrowing as less and less coal moves at the high prices of last week. No seller wants to have high-priced coal confiscated at the Hoover level and there is also a growing feeling among producers that the wisest policy is to accept a reasonable return, especially as the car supply is to be contingent upon the observance of fair prices.

Contrary to expectations, priority orders have not

swamped the mines now operating nor has the car supply improved materially, even for those producers who had accepted such preferential business.

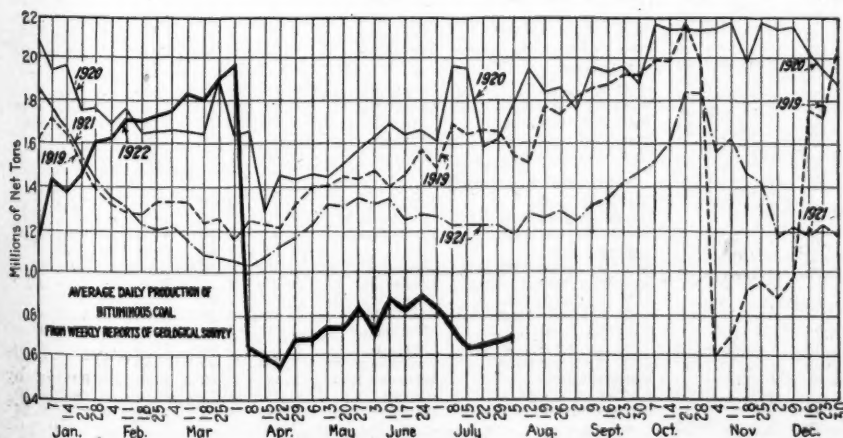
Central Pennsylvania mines were the only ones to score advanced prices during the last few days. Somerset producers are now advocating \$4.75 as a fair price for their coal during the present emergency. Smokeless agencies at Hampton Roads also kept their prices on the upgrade, mainly because the piers were unable



to secure sufficient coal to accommodate the vessels awaiting cargo. On the other hand, smokeless firms in the Midwest were the foremost in observance of the Hoover fair-price list.

The feeling that a resumption of union mining is impending is reflected in this week's market for British coal in this country. Heavy orders had been placed in Great Britain for consumers in New England and the Atlantic seaboard but cancellation of some of these orders, amounting to many thousands of tons, followed the events of the week in the coal trade. As delivery of British fuel involves several weeks' time, no consumer wants to have much of this tonnage enroute or on unfilled orders when there is a prospect of home-mined coal being available in the near future.

Anthracite consumers are now fully realizing that a shortage of coal awaits them this winter. Retail deal-



### Estimates of Production

(Net tons)

#### BITUMINOUS

Week ended:	1921	1922
July 15 (b).....	7,401,000	4,123,000
July 22 (b).....	7,380,000	3,692,000
July 29 (a).....	7,319,000	3,933,000
Daily average.....	1,220,000	656,000
Calendar year.....	224,729,000	203,279,000
Daily av. cal. yr.....	1,272,000	1,145,000

#### ANTHRACITE

July 15.....	1,876,000	31,000
July 22.....	1,837,000	27,000
July 29.....	1,750,000	27,000

#### COKE

July 22 (b).....	41,000	105,000
July 29 (a).....	45,000	110,000

(a) Subject to revision. (b) Revised from last report.





the Rocky Mountain states, particularly Colorado and Utah, there has been an increase, partly through more active demand, partly through return of striking miners to work.

"Of all districts, Pennsylvania has been most closely watched to learn the response to the invitation to re-open mines. Preliminary returns indicate the shipments for last week (July 31-Aug. 5) will be 792,200 tons. In comparison with the week of June 24, before the Washington conferences, this is an increase of 24,000 tons or 3 per cent.

"In comparison with the preceding week (July 24-29), shipments from Pennsylvania show a decrease of 6.7 per cent. All districts except South Fork and central Pennsylvania have so far shipped less coal than two weeks ago. Up to the present time, therefore, mines that have responded to the invitation to resume operations have added but little to the coal supply of the country. The increased production has come instead from the middle Appalachians and is made possible by improvement in car supply."

All-rail shipments to New England were 436 cars during the week ended July 29, as compared with 445 cars in the preceding week. Most of this tonnage is on contract, as spot coal of the all-rail variety is more urgently needed elsewhere and New England is not yet feeling the pinch of the fuel shortage to the extent where it will pay the going price for this coal.

Hampton Roads dumpings during the week ended Aug. 3 were 277,072 net tons, nearly 50,000 tons short of the previous week's figure. New England took approximately 200,000 tons of this. There is only a small tonnage at the Roads, but conditions are improving, as the railroads supplying these terminals are now moving cars more easily.

Lake dumpings during the week ended Aug. 7 were 89,187 net tons—73,224 tons cargo and 15,963 vessel fuel—as compared with 153,890 tons in the preceding week. The season's movement to date is now 4,632,124 tons; last year it was 14,127,800 tons.

The Northwestern market is becoming skittish. Spot coal is so scarce that it is almost unobtainable and prices are strong. It is not yet too late to save the day if mining is resumed at an early date. Meanwhile, industries are swapping coal supplies around to keep the wheels turning, although the shortage is daily closing down more plants.

#### ANTHRACITE

A few cars of hard coal were loaded during the week ended July 29, chiefly steam sizes dredged from the rivers, the total output being estimated at 27,000 net tons. Domestic consumers are now anxiously interviewing their retailers in an effort to find out when they can expect coal deliveries. It is evident that when mining is resumed the distribution problem will be a difficult one to solve. Pea coal is still

### Kentucky January-June Coal Output Exceeds Same Period of 1921 by 5,000,000 Tons

KENTUCKY produced 17,267,132 tons of coal in the first six months of this year, in sixty-nine working days, according to the semi-annual report of the State Department of Mines, issued by L. Blenkinsopp, chief inspector of mines. This was a daily output of 250,248 tons and is a net increase of 5,020,727 tons over the output for the first six months of 1921. The output during the first half of 1921 was 12,097,168 tons.

"Assuming the mines were operated full time, or twenty-four days each month, the State of Kentucky would produce 72,071,425 tons of coal a year at this rate of production," the chief mine inspector said, in commenting on the report.

Each of the eight districts in the state, except the fourth, composed of Knox and Whitley counties, showed an increase over the production for the first six months of last year. The increases ranged from 14 to 53 per cent. The net increase for the entire state over the tonnage for the first half of 1921 was 41½ per cent. The decrease in the fourth district was 49,237 tons, or 12 per cent under the tonnage for the same period last year. This decrease is accounted for by a decrease in the number of men employed in the district from 1,482 in 1921, to 767 in 1922, says the report.

### How the Coal Fields Are Working

Percentages of full-time operation of bituminous coal mines, by fields, as reported by the U. S. Geological Survey in Table V of the Weekly Report

	Six Months July to Dec. 1921	Jan. 1 to Apr. 1, 1922 inclusive	April 3 to July 22, 1922 inclusive	Week Ended July 22
U. S. total.....	45.6	55.7	.....	.....
Non-Union				
Alabama.....	63.5	64.6	No report	
Somerset County.....	55.5	74.9	44.6	36.8
Panhandle, W. Va.....	55.3	51.3	44.6	44.6
Westmoreland.....	54.9	58.8	82.7	86.3
Virginia.....	54.8	59.9	77.8	51.3
Harlan.....	53.3	54.8	46.7	26.1
Hazard.....	51.7	58.4	54.0	14.6
Pocahontas.....	49.8	60.0	72.5	37.8
Tug River.....	48.1	63.7	78.2	29.9
Logan.....	47.6	61.1	70.4	20.2
Cumberland-Piedmont.....	46.6	50.6	16.4	22.4
Winding Gulf.....	45.7	64.3	68.6	37.3
Kenova-Thacker.....	38.2	54.3	No report	
N. E. Kentucky.....	32.9	47.7	53.5	17.2
New River.....	24.3	37.9	29.8	35.2
Union				
Oklahoma.....	63.9	59.6	14.6	13.5
Iowa.....	57.4	78.4	0.0	0.0
Ohio, Eastern.....	52.6	46.6	0.0	0.0
Missouri.....	50.7	66.8	2.2	4.4
Illinois.....	44.8	54.5	0.0	0.0
Kansas.....	42.0	54.9	16.4	27.7
Indiana.....	41.4	53.8	0.0	0.0
Pittsburgh.....	41.2	39.8	0.0	0.0
Central Pennsylvania.....	39.1	50.2	11.9	13.6
Fairmont.....	35.3	44.0	39.8	4.0
Western Kentucky.....	32.5	37.7	62.6	60.1
Pittsburgh*.....	30.4	31.9	0.0	0.0
Kanawha.....	26.0	13.0	5.8	8.0
Ohio, southern.....	22.9	24.3	0.0	0.0

\* Rail and river mines combined

† Rail mines

‡ Union in 1921, non-union in 1922.

### Car Loadings and Surpluses

Cars loaded:	All cars	Coal cars
Week ended July 22, 1922.....	861,124	76,060
Previous week.....	860,907	77,334
Same week a year ago.....	788,034	149,805
Surplus cars:		
July 15, 1922.....	233,029	151,727
July 8, 1922.....	239,160	146,743
Same date a year ago.....	370,000	175,000

moving, but railroad demands for this, as a substitute for steam sizes, will soon render even this grade unobtainable.

#### COKE

Beehive coke output increased slightly during the week ended July 29, when 110,000 net tons were produced, as compared with 105,000 tons during the preceding week. The Connellsville output is at its highest mark since the strike began, having climbed slowly to a weekly figure of 72,700 tons. Coke offerings are still very light, however, as most of the increased production has been by furnace ovens.

The railroad strike is contributing to an increasing car shortage, which is cutting down the production about one day's output, or 250,248 tons, per week, according to production figures received recently, the report shows. The average number of days worked in the mines in the first half of 1921 was forty-five. This was raised to sixty-nine for the half year just closed, an increase of twenty-four working days.

### Operators Restore 1920 Scale in Parts of Kentucky and Tennessee

A JOINT arbitration board of the Kentucky-Tennessee district, meeting in Cincinnati, Ohio, reached a decision Friday, July 28, which will restore the wage scale of 1920 to union miners in the section around Pineville, Ky., to a few mines in the vicinity of Nashville, Tenn., and along the line of the Tennessee Central Ry. The award grants an increase of wages amounting to 24c. a ton to pick and machine miners; 20 per cent increase on yardage and deadwork, and \$2.50 a day to day and monthly men.

It is contended by the operators that the award is not a recognition of the union but simply is a resumption of the 1920 wage scale with the miners as individuals. The award practically is said to be the scale of wages which is embodied in President Harding's coal-settlement proposition.

## Foreign Market And Export News

### Orders for British Coals Canceled as Strike Settlement is Expected

**C**ANCELLATION of some American coal contracts, amounting to many thousands of tons, placed on the British market recently, has followed the belief that an early settlement of the United States coal strike may be expected soon. In spite of this, however, the Canadian and German calls are increasing and prices are at least firmly held. Production is well taken and new business is limited by the general scarcity.

Production in Great Britain during the week ended July 22 was 4,391,000 gross tons as compared with 4,627,000 tons, according to a cable to *Coal Age*. The somewhat sudden American demand galvanized buyers in Europe and South America, who had been holding off with the idea of forcing down prices.

*Coal Age's* London correspondent, reading that the American miners had obtained the pledge of the British Miners' Federation not to supply coal for shipment to the United States, interviewed one of the British miners' readers, who says that no such pledge has been given. The British miners' view is that when they were on strike, America sent as much coal as it was able to mine and British labor is now returning the compliment.

#### Hampton Roads Pier Situation

	—Week ended—		
	July 27	Aug. 3	
N. & W. Piers, Lamberts Point:			
Cars on hand	600	766	
Tons on hand	34,770	46,796	
Tons dumped	111,026	105,752	
Tonnage waiting	61,100	59,975	
Virginian Ry. Piers, Sewalls Point:			
Cars on hand	745	660	
Tons on hand	41,450	35,850	
Tons dumped	111,620	70,203	
Tonnage waiting	79,749	78,938	
C. & O. Piers, Newport News:			
Cars on hand	637	418	
Tons on hand	32,000	22,000	
Tons dumped	66,977	71,431	
Tonnage waiting	17,970	11,455	

#### Coal Paragraphs from Foreign Lands

**ITALY**—Cardiff steam first is quoted 40s. 9d., according to a cable to *Coal Age*, as compared with last week's price of 36s. 6d.

**GERMANY**—Production in the Ruhr district during the week ended July 22

was 1,800,000 metric tons, as cabled to *Coal Age*. In the preceding week the output was 1,760,000 tons.

#### British Exports, June 1920, 1921, 1922

Country	1920	1921	1922
Russia	19,787		78,676
Sweden	169,184		186,970
Norway	89,834		99,973
Denmark	68,873	2,593	203,030
Germany			889,644
Netherlands	2,010		568,081
Belgium	65,926		154,091
France	860,748		982,071
Portugal	16,992		80,863
Azores and Madeira	11,229		13,034
Spain	3,079		115,011
Canary Islands	27,699	8	35,604
Italy	262,021		467,459
Austria-Hungary	12,379		
Greece	268		28,255
Algeria	38,328		57,558
French West Africa			9,770
Portuguese West Africa			
Chile	24,388		13,609
Brazil	403	315	13,541
Uruguay			114,799
Argentina Republic			48,513
Channel Islands	8,241		164,421
Gibraltar	79,604		2,590
Malta	51,110		23,308
Egypt	56,507		13,292
Anglo-Egyptian Sudan			119,485
Aden and Dependencies			
British India			2,817
Ceylon			78,018
Other countries	61,998	4,586	26,236
Total June	1,930,608	7,502	4,793,648
Total May	2,139,261	14,066	5,057,237

#### QUANTITY AND VALUE OF EXPORTS, JUNE AND FIRST SIX MONTHS

	Gross Tons		
	June	1st 6 mos.	
1920	1,930,608	14,431,533	
1921	7,502	6,025,448	
1922	4,793,648	27,183,960	
	Value		
1920	£7,932,817	£54,900,469	
1921	12,677	15,433,560	
1922	5,391,946	30,847,763	

#### Hampton Roads Scarcity Is Acute

The situation was acute last week, with shipments about 50 per cent of normal, and prices soaring. Piers were dumping below standard, and movement of coal was only slightly better.

The N. & W. embargo to the North and West by rail from the Clinch Valley, Virginia, and Tug River and Po-

cahontas fields, appeared to be having only slight effect. This embargo applied to all grades except classes one and two, and as these are the only classes generally shipped to Tide, the embargo is expected to result in little stimulation.

The Hoover embargo on bunker coal was not being observed to any appreciable extent. Vessels are being served as rapidly and as completely as supplies will admit. Only one cargo cleared last week.

#### June Exports and Imports (GROSS TONS)

	June 1921	June 1922
Exports, bituminous coal:		
By rail to:		
Canada	1,412,497	427,849
Mexico	17,830	5,937
Total	1,430,327	433,786
By vessel to:		
West Indies	21,946	8,942
Panama	8,522	19,101
Cuba	71,750	17,517
Total	102,218	45,560
France	147,333	
Italy	258,735	14,359
Netherlands	86,031	
Sweden	5,189	
Denmark	43,824	
Belgium	20,843	
Total	561,955	14,359
Argentina	92,727	12,893
Brazil	57,127	11,050
Chile	1,935	4,697
Uruguay	15,861	
Total South America	167,650	28,640
Egypt	42,619	10,995
Other countries	1,009,744	7,210
Total bituminous exports	3,314,513	540,550
Total anthracite exports	495,896	40,284
Total coke exports		100
Imports, bituminous coal:		
Imported from:		
United Kingdom		3,889
Canada	74,367	120,111
Japan	7,500	300
Australia	2,208	8,187
Other countries	25	2,856
Total bituminous imports	84,100	135,343
Total anthracite imports	868	64
Total coke imports	2,200	4,238

#### Pier and Bunker Prices, Gross Tons PIERS

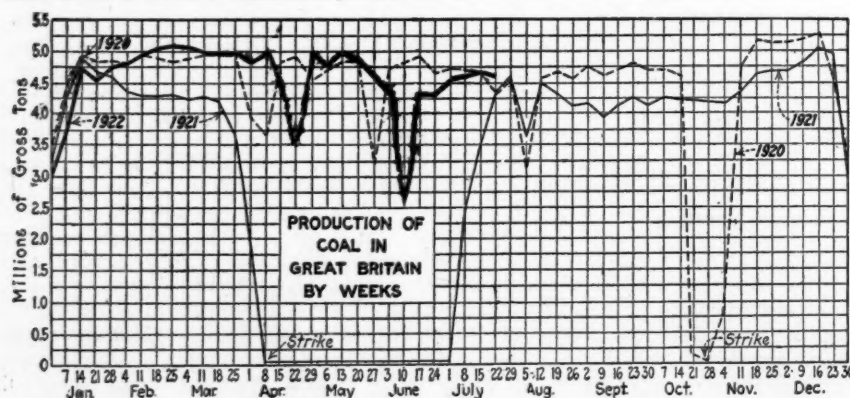
	July 29	Aug. 5†
Pool 11, New York	\$10.50@11.50	\$11.00@11.25
Pool 1, Hamp. Rds.	8.00@11.00	9.25@10.00
Pools 5-6-7 Hamp. Rds.	8.00@11.00	9.25@10.00
Pool 2, Hamp. Rds.	8.00@11.00	9.25@10.00

	July 29	Aug. 5†
Pool 11, New York	10.50@11.50	11.25@11.50
Pool 1, Hamp. Rds.	8.00@11.00	9.25@10.00
Pool 2, Hamp. Rds.	8.00@11.00	9.25@10.00
BUNKERS		
Welsh, Cibra	43s. f.o.b.	38s. 6d.
Welsh, Rio de Janeiro	57s. 6d. f.o.b.	57s. 6d. f.o.b.
Welsh, Lisbon	43s. f.o.b.	38s. 6d. f.o.b.
Welsh, La Plata	50s. f.o.b.	50s. f.o.b.
Welsh, Genoa	42s. t.i.b.	38s. t.i.b.
Welsh, Algiers	38s. 6d. f.o.b.	38s. 6d. f.o.b.
Welsh, Pernambuco	65s. f.o.b.	65s. f.o.b.
Welsh, Bahia	65s. f.o.b.	65s. f.o.b.
Welsh, Maderia	42s. 6d. f.a.s.	42s. 6d. f.a.s.
Welsh, Teneriffe	40s. 6d. f.a.s.	40s. 6d. f.a.s.
Welsh, Malta	44s. 6d. f.o.b.	42s. 6d. f.o.b.
Welsh, Las Palmas	40s. 6d. f.a.s.	40s. 6d. f.a.s.
Welsh, Naples	38s. f.o.b.	38s. f.o.b.
Welsh, Rosario	52s. 6d. f.o.b.	52s. 6d. f.o.b.
Welsh, Singapore	55s. f.o.b.	58s. 9d. f.o.b.
Welsh, Constantinople	50s. f.o.b.	50s. f.o.b.
Welsh, St. Michaels	50s. t.i.b.	50s. t.i.b.
Welsh, Alexandria	43s. f.o.b.	44s. f.o.b.
Welsh, Port Said	46s. 6d.	46s. 6d.
Welsh, Buenos Aires	50s. f.o.b.	50s. f.o.b.
Durham, Antwerp	30s. 6d. t.i.b.	30s. 6d. t.i.b.
Durham, Hamburg	26s. f.o.b.	26s. f.o.b.

#### Current Quotations British Coal f.o.b. Port, Gross Tons

	July 29	Aug. 5†
Cardiff:		
Admiralty, Large	29s. @ 30s.	29s. @ 31s.
Steam, Smalls	17s. @ 21s.	21s. 6d. @ 22s. 6d.
Newcastle:		
Best Steams	24s. @ 25s.	25s.
Best Gas	25s.	25s.
Best Bunkers	23s. @ 25s.	25s.

Advances over previous week shown in heavy type; declines in italics.





## North Atlantic

### Government Plan of Control Checks Ascent of Prices

**Requests for Priority Shipments Fail to Exhaust Current Output—Non-Essential Industries Hustle Before Market Is Closed to Them—Buyers Cautious in Short Market.**

**G**OVERNMENT action to control coal supply at the mines has definitely checked soaring prices. Many requests for priority shipments have been filed, but as yet these orders have not taken up the full current production. Non-essential industries have been active in purchasing whatever tonnage is offering before the priority door closes the spot market to them.

Buyers are proceeding cautiously, however, and refuse to pay the high figures quoted last week. Considerable bargaining has resulted, a strange feature in such an extremely short market. A feeling that the strike may be settled before much more British coal can be received here has caused several cable cancellations of orders this week.

#### NEW YORK

Anticipating the full functioning of the priority orders, buyers for non-essential industries invaded the market the last few days of the week and made heavy purchases. Some of these manufacturers were not actually in need of coal but did not choose to wait idly by and watch the railroads and other preferred classes pick up the available supply.

There is considerable uncertainty in the situation and the outcome of the conference held by union leaders and operators in Cleveland on Wednesday was closely watched. Some of the smaller operators are said to be willing to make contracts covering from four to six weeks or longer at prices much lower than the current market quotations.

Buying of British coal was quieter. The first cargoes are expected to arrive here about Aug. 10, although it was reported that three cargoes had already reached the harbor. It is not believed that any foreign coal will be shipped here unless it is already sold. Users of some British coal that has already been received on the Atlantic seaboard are said to be complaining of its burning qualities. Local quotations ranged \$9.50@10.50 c.i.f. Some orders for British coals have been canceled this week, apparently in the belief that the strike will be settled before the coal can be received.

Southern coals came here slowly and were quoted \$9@9.50, Hampton Roads, and \$11.50@12, New York. There were 304 cars at the local piers on

Aug. 4, a slight increase over the previous week. Most of this was of Pool 11 quality. B. R. & P. coals were quoted locally \$7.25@8.25; Broadtop \$8@8.25, and Shawmut around \$7.25.

#### CENTRAL PENNSYLVANIA

July production averaged 644 cars per day, a total of 14,075 for the month, a little below that of June. However, during the latter part of the month there was a big gain, the week ended July 30, showing loadings of 3,864 cars.

Shortage is beginning to be felt among the industrial plants of the district. Prices on the spot market are a little lower, ranging around \$7.50 at the mines.

Reports from the leading operators in the district indicate that central Pennsylvania will not be represented at the conference in Cleveland. The district never was a part of the central competitive field and the operators have always made their agreements with their employees as a distinct unit.

The Pennsylvania Railroad has announced that in order to take care of the railroad's current needs, it will be necessary to obtain from the producers 20 per cent of their output. The price is to be agreed upon later.

#### BALTIMORE

While a state commission for Maryland has been named in order that coal movement be regulated, it has not started to truly function, as complete instructions from Washington as to procedure are lacking. Meanwhile the plan of rationing, while making some industries hold out for better prices, is by no means forcing a sharp depression in quotations. Individual prices are being paid, and willingly, to get coal at all in many cases.

The Public Service Commission sent out a questionnaire in connection with the state plan of control, asking larger industries of the state whether they had much fuel on hand, and, as another thought, whether they would share with less fortunate places in case of necessity. As a matter of fact few of the Maryland plants have large stocks ahead. The gas and electric light plant of Baltimore only has about twenty-five days' stock on hand. There is still some movement by barge from Norfolk to care for bunker needs and a small line distribution.

In July the total bunkers loading on foreign bound ships only amounted to 6,721 tons. The first ships bringing English coal to Baltimore are expected to dock about Aug. 15. Conditions in the local market at that time will have much to do with the distribution.

#### PHILADELPHIA

Heavier arrivals have been noted during the past week. Many a would-be purchaser, however, is deferring orders in the hopes of a quick settlement of the strike. Prices for spot coal are still high, still running from \$7@9, although little is believed to have been sold at the high figure recently.

If anything there is a slight decline in quotations, and a fair quantity of

coal has been sold at \$8. This may have been caused by the proposed priority orders of the I. C. C., which, while they have not as yet taken effect, have had a tendency to keep some purchasers in the background, believing that they will be able to get a more favorable price.

Good business with the large industries and utilities continues to go forward on foreign coals. Early in the week houses handling this coal reported some difficulty in arranging for boats, as the prices of charters have increased considerably. Orders placed now are mostly for September delivery, although it is quite possible some free cargoes are still afloat.

#### FAIRMONT

Although there was a rather marked increase in the number of mines in operation during the closing week of July, that was due more to an improvement in transportation than to any general response on the part of the miners to the President's appeal to return to work. Operators engaged in a general effort to put mines on an operating basis, secured injunctions, placing guards on duty and cleaning up mines in general.

#### UPPER POTOMAC

A production of about 25,000 tons for the last week of July was being taken care of without any trouble by the Western Maryland, which was also furnishing all the cars needed. Approximately 40 mines in this district are now producing. Intimidation of men who want to return to work is the principal barrier to further operations.

#### West

#### KANSAS CITY

The coal shortage is being felt very acutely and prospects for increasing the production is not so bright as a week ago. Some of the miners that have been working right along have quit or at least failed to report for work and two large mines that have been producing are idle for the first time in several months. The rumor is that Howatt is responsible for this and his action is another slap at the industrial court law of Kansas.

The public is getting all "het up," and feels that the strike should be settled right even if it takes all year to do it and there should be no temporizing.

#### SALT LAKE CITY

Although more coal is being mined than in 1921, operators are not able to properly take care of the demand. One prominent retail house is asking its customers to accept less than half what they order, believing that coal will be more plentiful by Jan. 1.

Railroads that never bought in Utah before are now taking 30,000 tons a day. All railroad demand cannot be filled. Anxiety is felt lest the coal situation will hamper essential industries.

There is from 20,000 to 25,000 tons in the yards of the city, and about half of this is in the hands of one concern owned by a large operating company. It looks as if the independent dealer will have a hard time of it.

## Anthracite

### "When Can Anthracite Be Had?" Is Burning Question

**Resumption Not in Sight, Dealers "Book" Orders or Substitute Pea Coal—Commercial Shortage of This Size Likely Soon—Distribution Problem Will Be Difficult on Resumption.**

ALL in the trade now fully realize what a serious condition confronts the consumer of anthracite. The principal question addressed to retailers is when coal will be available. No tangible move is in sight to insure the resumption of mining and dealers can only take orders for future delivery or substitute at this time with shipments of pea coal. This size is moving fast and the request of the railroads that mine storage tonnage be held for their use will soon cause a commercial shortage. It is evident that when mining is resumed the question of distribution will be a difficult one.

River coals are very active and a large quantity of this fuel is being mixed with bituminous. Prices have risen, quotations ranging \$2.75@ \$3 f.o.b. mines.

#### NEW YORK

The principal topic discussed by consumers nowadays is when they can expect shipments. There is practically no coal to be had.

With the situation becoming graver because of the trouble in the soft coal fields, the railroads began using pea and finally took in the available supply. The companies now have none to offer.

To most of the trade it is becoming more apparent every day that the movement of anthracite, after the mines resume operations, will be one of distribution and that well-laid plans will have to be formulated so that the coal will be evenly divided.

There are the usual orders on the books of local dealers covering the tonnage generally requested by regular customers. Dealers believe that owing to some "wise" buying in March and April house owners have a good supply on hand to start the winter.

There was some independent pea in the harbor that was quoted \$12@ \$13, alongside. Stock buckwheat was \$10.50 @ \$11, alongside; screenings, \$2.25 @ \$2.75 at point of loading and river barley, \$2.50 @ \$2.75.

#### PHILADELPHIA

The present situation parallels the strike of 1902, at least in the matter of duration, although it will take a month yet before the present suspension equals that of the former year. However, at this time it seems altogether likely that the record will be reached, as no tangi-

ble move is in sight to insure the return of the men to work.

Each day shows a fast increasing concern on the part of the consumer. The dealers who ordered pea are in most instances delivering it as fast as it comes in, and the shippers are being pressed for shipment on the balance of the orders.

Some dealers have advised their customers that the time of resumption is still very uncertain and advising them to take a few tons of pea coal. In one instance this has resulted in the dealer's entire stock of pea being taken up and he has refused to sell any more to transient trade. The price of pea at retail strengthens and most sales are being made at \$11, the old winter price.

The trade in river barley is active and a large quantity is being bought for mixing with bituminous coal. While no price higher than \$3 is heard, the difference between minimum and maximum quotations has shortened considerably. Most of the coal is now being moved from \$2.60 @ \$3.

#### BALTIMORE

With only a small quantity of pea coal left, hard coal dealers are at their wits' ends to advise regular customers. Some are suggesting the purchase of some soft coal to tide over the first weeks of cold weather. Few dealers can see how everybody is to be supplied with even a little coal should the strike continue until Sept. 1. There is some new talk of using coal dredged from the bed of the Susquehanna River, but this fuel will not burn properly without a special grate and a special "blower" attachment.

The public is growing uneasy at last and the entire situation seems sure to grow tense in the next few weeks.

#### BOSTON

Retail dealers have now been reduced to minimum reserves of prepared coal for hotel, hospital and other current uses. Interviews with representative distributors disclose stocks only for a few weeks at the most. Another month of mine idleness will force an active interest in wood and oil for household fuel.

The last available shipments of pea size are going forward. What pea is left in storage is being saved for locomotive fuel and there is little chance of augmenting supplies of this size for domestic use.

#### BUFFALO

The trade is practically dead and oddly enough nobody seems to be disturbed by it. Some consumers would put in a supply if they could get it, but nobody is in a hurry.

One reason for expecting a decline in price is probably because soft coal is pretty sure to drop as soon as mining is resumed. It is even expected to go down just as soon as the time is set for resumption of mining. So the consumers of anthracite are on the watch for something of the sort in their own trade. The wise consumer has learned

that substitutes, along with the steam sizes of hard coal, will be on the market at a reduction and they can be put in. In fact it seems likely that they would have to be put in to help out.

## Coke

### CONNELLSVILLE

Production is believed to be increasing constantly, but at a very slow rate. The strikers seem convinced that they are going to win. Many operators are making constant efforts to attract men back to work but can hardly be said to be pursuing anything like a strenuous policy in this respect.

In the open market, prices reached their top point Aug. 1, when the market was firm at \$14.50 for furnace coke and \$15.50 for foundry coke, with reports of some sales of good brands of foundry coke at \$16.50, if not at \$17. Coke offered as "furnace coke" does not go to blast furnaces, the price being prohibitive, and is probably taken by foundries simply as a second or third grade material. The market has softened a trifle from the top point, being now quotable \$13.50 @ \$14 for furnace and \$15 @ \$15.50 for foundry.

The *Courier* reports production during the week ended July 29 at 58,480 tons by the furnace ovens, an increase of 1,900 tons, and 14,220 tons by the merchant ovens, an increase of 2,130 tons, making a total of 72,700 tons, an increase of 4,030 tons.

### UNIONTOWN

Much like the voluntary price agreement plan, the enforced coal price program through distribution of car supply has so far proven entirely feasible on paper but not of sufficient strength to combat an acute need for fuel. It may be said, however, that the first slump in coal prices was in anticipation of the Hoover price plan being enforced immediately and when day after day passed without any effort to divert the tonnage produced here from its original channel, the market commenced stiffening slowly.

Operators have definitely commenced to recruit their labor forces outside the region. With the local workers more determined than ever, after four months of idleness, to force recognition of their union hope of resumption with former employees apparently has passed. Many men are coming from the Southern fields but it is reported that quite a few are union miners coming from other districts for employment.

There is no troop protection in Fayette County, Sheriff I. I. Shaw having announced that the state police and mine guards were able to handle the situation. There is, however, a growing sentiment demanding that more positive action be taken to put a stop to outrages against men willing to work.

### BUFFALO

The market is nearly a blank. The ovens are asking \$15 @ \$16 for any good grade and consumers are holding off as much as possible. Connellsville is taking out some banked coal and part of that goes for coke, but the supply is very limited.



## Chicago and Midwest

### Midwest Market Is Still Abnormal and Unsettled

Everybody from Operators to Dealers Holds Up Prices and Sits Back to See What Will Happen—Priority Scheme Starts Haltingly.

THE whole region has been upset all during the week by the way in which the new priority scheme of coal distribution started into effect. Everybody expected a sudden and effective drop in prices of all Kentucky coals, a flood of shipments on priority and a fairly certain car supply to all fields. The drop started but never finished. The flood of priority orders was only a small stream and car supply, while starting well enough at the beginning of the week petered down on the Louisville & Nashville to the same old 20 and 30 per cent. The general result on Saturday was that some coal was moving on priority orders at the government price of \$3.50 from operators who were irate because there remained a good deal of free coal at prices ranging \$6.50@ \$10 or more.

Illinois particularly was upset during the week by the report of a shut-off of all coal from outside the state and west Kentucky, in Chicago, which had dropped to about \$9, bounded sharply up to \$12 and then down to \$10 when rather uncertain assurances came that the shut-off would not be complete.

#### CHICAGO

All eyes and all minds in the coal industry during the past week were on Washington and on the fuel distribution system supposed to have taken full effect during that period. Prices on this market did not slide to the bottom, as some expected, for two or three reasons. They stayed up during the fore part of the week because it was anticipated at the outset that the coal then rolling and north of the Ohio River would be about the last fuel on the market here for awhile. Then, when Kentucky mines did not swamp under priority orders and when car supply did not rise much if any above former unsatisfactory levels, a little coal kept coming in at \$9 or more.

Then when Robert M. Medill, state fuel distributor, stated publicly that Illinois could not expect any more coal from outside the state, the market, already skittish, suddenly vaulted again to \$12 only to quiet down on Saturday to \$10. It was generally said, by well-informed coal men, that the outside supply could not, in fairness be cut off

from this state. Mr. Medill, in a message to *Coal Age* Saturday said the Illinois supply had not yet been cut off but that the state cannot expect to get "even a large part of our requirements."

Western Kentucky was about the only coal traded on this market during the week. A few cars of eastern Kentucky came in at \$8.50 but that was all.

#### ST. LOUIS

With a week's supply of coal left, St. Louis faces a real famine, although this is not going to be as disastrous as might be expected, for all the larger plants have gone to using oil. The latest addition is the Illinois Glass Co., at Alton, and practically all of the big plants in the east side industrial district have gone to oil. St. Louis every day sees new oil users, especially among those plants that would not be classified as essentials. The Union Electric Light & Power Co. has two weeks' supply ahead and nothing further in sight. The United Railways has gone to oil.

The mayor declined to do anything about the famine but Governor Hyde appointed a fuel administration. It consists of McIndoe of Joplin, chairman of the public service commission, as chairman, E. J. Wallace of St. Louis, E. R. Sweeney of Kansas City, Attorney General Jesse W. Barrett, Edward P. Diel of Charleston, Colonel James H. McCord of St. Joseph and E. L. Wilheit of Springfield.

Kentucky coal is selling at \$5@ \$10 at the mine. All roads excepting the I. C. are observing the priority rules. Alabama is selling \$5@ \$8 at the mine. No West Virginia is coming in and very little Missouri.

#### INDIANAPOLIS

There is no such thing as a coal market in Indiana now. Demand is big but orders are not being booked even by those who have West Virginia or Kentucky coal for sale because the car situation is growing worse. The utilities of the state who can use Indiana bituminous coal are watching the efforts of state officials to mine sufficient coal to keep them going.

There is some coal drifting into the state from outside sources, but the supply is suffering and there is a positive shortage at the present time. Each day brings reports of more industries shutting their plants because of inadequate fuel. A survey of the situation shows hundred of plants burning their reserve supplies and dozens will be forced to close down within the next week unless there is a change. Prices, naturally, are strong where coal is available.

#### SOUTHERN ILLINOIS

Quiet still prevails in southern Illinois, although the miners are restless and are finding it hard to make both ends meet.

A few wagon mines are getting out coal for local purposes at a few points in southern Illinois but the tonnage is small. One of these is reported in the

Carterville field and a few others in the Standard district. During the past week miners at O'Fallon prevented the loading of several thousand tons of slack that had been on the ground for a few years, which had been sold to the City of St. Louis for the waterworks. The union officials notified the drivers that unless they wanted a repetition of the Herrin affair that they had better let the coal alone. They let it alone.

#### WESTERN KENTUCKY

A good deal of priority business is reported on the L. & N., while the I. C. does not appear to have very much of this business so far, and with an almost full car supply has been able to furnish more equipment for commercial business than the L. & N. At Madisonville the L. & N. agent is refusing billing on cars unless on priority, or consigned to railroads and utilities.

On priority and railroad or utility business Hoover prices are said to control, plus 8 per cent brokerage if buying is not direct. Prices on commercial business, where there is no priority, were reported sold at as high as \$10 a ton this week though prices wavered from \$6.50 up.

Operators are dying hard when it comes to acceptance of the Hoover prices, and are holding out for everything they can get, on the basis that priority will eventually take care of all production, and that there are not enough priority orders at this time to enable anyone to withhold cars where Hoover prices are not maintained. Western Kentucky has not accepted the Hoover price, except contingent upon satisfactory car supply. This it has not received.

#### LOUISVILLE

Tightening up of the market on open commercial coal is resulting from priority orders, and the fact that it is almost impossible to make shipments over the L. & N.—that is from L. & N. mines—except to railroads, utilities or on priority orders.

Local jobbers reported at the end of the week that Chicago is offering \$10 @ \$10.50, where car numbers of coal rolling can be supplied. It is hard to determine a market on either eastern or western Kentucky, as reports are received of some \$6@ \$6.50 coal, and of other coal sold at \$10 in both fields.

It is reported that operators who are supplying tonnage at \$3.50 are getting a bit wrought up over the fact that others are continuing the high quotations.

## Canada

#### TORONTO

The public is now thoroughly aroused to the seriousness of the situation, indicated by a shortage in the normal coal supply, estimated at 800,000 tons. There is no anthracite now procurable except a limited amount of pea and buckwheat.

The Civic Board of Control has ordered \$100,000 worth of Welsh coal for immediate shipment, and has asked for an additional appropriation of \$500,000, in order to have an emergency supply on hand during the winter.

## Eastern Inland

### Cleveland Conference Delays Buyers and Reduces Prices

**Believe Settlement May Soon Be Reached—Spot Tonnage Exceeds Priority Orders—Lakes May Be Aided By New Government Fuel Committee.**

**E**VERYONE is watching the Cleveland conference of producers and miners. The feeling is prevalent that a settlement may be evolved therefrom and this is quite a factor in delaying coal purchases. At the same time, operators have found that they still have free coal to offer, in addition to the priority orders for so-called essential industries and prices have softened from last week's peak.

Commercial coal is moving warily, as no one wants high-priced fuel confiscated at Hoover levels. Lake business is still light, but the Northwest needs may yet be safeguarded by the efforts of the Lake branch of the Federal fuel committee.

#### CLEVELAND

Coal for retail distribution and for so-called essential consumption is considerably stronger, despite the priorities in the movement of fuel effective under orders of the I. C. C. Most of the open market coal is now coming from the Pittsburgh district, at \$8@ \$8.50.

Early this week, operators and wholesalers were unloading at \$6, expecting a price of \$3.50, or within the Hoover maximum. The B. & O. has started moving coal only on the priority list, but it is finding that not enough orders are in to make the priority movement necessary. As a result, the rule has been lifted temporarily and coal again is being loaded for industries in general. This development has helped to strengthen the Cleveland market.

Applications are being filed by those who believe themselves entitled to coal under the priority regulations. The railroads serving the Southern coal producing territory still are clogged at the southern Ohio gateways. Sentiment is expressed that the government should divert locomotives from other roads to the non-union coal territory so that these roads could move out the coal accumulated on the mine sidings and railroad yards.

The total number of cars of soft coal received in the Cleveland district last week took a sharp turn upward. Up to Saturday, five of the seven railroads running into Cleveland had brought in 682 cars of bituminous coal for all purposes. This was the best six days' receipts on these roads since the week ended July 8. Receipts for the week ended July 1 were 1,145 cars; July 8, 838 cars; July 15, 545 cars, and for the week ended July 22, 489 cars.

#### EASTERN OHIO

The quantity of coal available in this section increased slightly during the week because of accelerated operations by stripping mines and the release of more non-union coal from the congested Ohio River gateways. The acute distress more apparent ten days ago seems to have subsided, somewhat due principally to curtailed industrial activities rather than the fulfillment of fuel requirements. Buyers of steam coal are holding off in anticipation of an early settlement of the coal strike.

The effect of the growing coal shortage is indicated by reports from various industrial centers in eastern Ohio. Blast furnaces are being banked in the Youngstown district and the Youngstown Chamber of Commerce has appointed a special fuel committee to superintend distribution of coal to domestic consumers and priority orders to industries.

In the Lake trade bunker coal is difficult of procurement and many steamers are either being delayed or discontinued temporarily.

At a meeting of the Lake coal forwarders and dock men, held in Cleveland recently, plans were made for securing a fair share of coal in order to take care of the railroads and public utilities in the Northwest.

#### NORTHERN PANHANDLE

An effort on the part of one large company to resume operations, even on the basis of the 1920 scale was attended by no success, the 1,300 miners employed declining to return to work in the absence of any nation-wide agreement. Operations in the Northern Panhandle have been affected by the proximity of these open-shop mines to the Pennsylvania and Ohio lines. Notwithstanding this production continues on a fairly large scale.

#### COLUMBUS

Operators are playing a waiting game, scanning every effort made to settle the coal strike. The position of the operators, as expressed through the officers of the associations is unchanged, that is, to refuse to enter the four-state conference, but to negotiate either by states or mining districts.

Only a limited amount of coal is moving and a large part is going to railroads for fuel. Federal and state fuel commissions have not started to function to a large degree and as a result some commercial orders are being placed, where priorities are not regarded.

Stocks in Columbus are generally sufficient for 30 days on the average. So far no manufacturing plant of any consequence has been compelled to suspend operations. Public utilities are supplied for a time and the same is true of municipalities.

With the opening of the stripping operations at New Lexington a larger tonnage is being produced in Ohio, although no large mines have accepted the invitation of the President to reopen.

#### PITTSBURGH

While some men are reported at work in certain mines, there is no actual production reported. It is said that many of the miners believe their strike is practically won, the refusal of the Pittsburgh and other districts to go to the conference at Cleveland called by President Lewis not having made an impression as yet.

Coal movement in the Pittsburgh district, involving non-union production from the Connellsville region, Westmoreland County, etc., has not yet been affected by the priority system or price regulations being formulated at Washington. Buyers are receiving coal they have purchased and there is little if any confiscating by the railroads.

From the top point of \$8.50 for Connellsville steam coal, reached on July 26, the market reacted sharply, owing to withdrawal of buyers, until on the morning of Aug. 1 the price was down to \$6. Consumers then began taking hold again and prices stiffened, the market averaging about \$7 in the past few days. Westmoreland gas has hardly been traded in at all. A little Youghiogheny gas has been in the market, at \$8@ \$8.50 lately, while recently prices up to \$9@ \$10 were paid.

Production in Westmoreland County is fairly heavy. In the Connellsville region there are almost constant gains.

#### DETROIT

Interest is centered on the state and county organizations which are being built in the effort to increase the supply of coal brought to Detroit and Michigan. Meantime, results of the present curtailed movement are being reflected in reports of industries and utilities confronting suspension of operation unless their supplies are replenished within a few days.

Outlining his plans to the Board of Commerce, C. F. Dunn, the Detroit fuel administrator expressed a desire that he be given complete authority to act without being subjected to the delay probable if he is required to refer matters to the Michigan securities commission or the state fuel administrator.

For the present the efforts of the county fuel administrator will be directed toward getting supplies for the utilities and users of steam coal. The matter of replenishing supplies of domestic coal will remain in abeyance until needs are more urgent.

#### BUFFALO

The situation is a trifle easier, apparently because the cars are moving faster than they were. The consumer is also helping out by refusing in a good many cases to buy at prices above \$8.

Everybody is convinced that more mining is going to be done before many days.

All sorts of prices are now paid. If a consumer is in a bad-enough way he will pay \$9 for it, but as a rule this section is holding off, in the hope, it appears, that something is going to be done. There are prices for what is called good slack as low as \$4.75 and there are prices all the way between.

The worst feature is the difficulty in getting Lake fuel. All prices up to \$10 are asked for it, with the amount usually limited to 50 tons. For July the total was 57,700 tons and for the season 832,910 tons.



## Northwest

### If Mining Resumes Now Northwest Will Rejoice

**Experts Figure Region's Needs Can Be Satisfied—Shortage Now Is So Sharp Northern Mines Are Closing—Market Gets Wilder.**

THE Northwest is praying for a resumption of mining during the first half of this month—and is beginning to count on it. The general opinion is that if production starts within that period, enough fuel will penetrate this far to stave off suffering. Things are now at a serious pass, however. Many Northern mining industries are closing down, shipping is hampered not only by high bunker prices but by absolute exhaustion of coal at some ports and the coal trade is thrown into confusion here and there by the seizure by railroads of coal on its way to consumers.

A fuel census of Minnesota now going on shows that supplies are at the lowest ebb and that demand from many sources is going to be much heavier than has been anticipated. Freight rates on wood in Minnesota have dropped 20 per cent to help that fuel to reach market.

#### DULUTH

Many industries over the territory served from the Head of the Lakes docks will be compelled to close down within a few days on account of coal shortage. The sales manager of one of the dock companies had to refuse an order for 500 tons of lump from a mining company on the Mesaba Range. The mining company manager, who had received 14 turn-downs from dock companies, said the mines would have to close down. Other mining and industrial concerns are in the same boat.

Ivan Bowan, state fuel administrator, estimates Minnesota's small-town needs up to April 1, 1923, at 560,831 tons of soft coal and 142,958 tons of hard, a total of 703,789 tons. He believes Northwest threshers must have 1,000,000 tons. Well-informed men estimate the requirements of this market up to May 1, 1923, at 1,200,000 tons of anthracite and 8,500,000 tons of bituminous, allowing for approximately 3,600,000 tons of coal on the docks when the season of navigation opened on April 21, last. Dock operators think the necessary tonnage can be moved from Lake Erie ports if mining is resumed during the first half of this month and provided the railroads can do their part.

Docks with anything to sell are asking \$8.50 for Youghiogheny, Hocking and splint lump, and up to \$6.50 for

screenings. Anthracite prices are unchanged.

#### MILWAUKEE

The coal market at Milwaukee is completely paralyzed. One coal company, which had a fuel contract with a railroad centering here, which it could not fill because of prior obligations, is having its coal on track confiscated by the railroad. Another company, which contracted to deliver 12,000 tons to city institutions, has defaulted on its contract. The company had been paying \$7 per ton to secure coal to deliver at \$5 as per contract. Another company asked to be relieved from a clause in its contract with the city covering the thermal units of coal.

State institutions and Milwaukee municipal buildings will be among the first to be benefited by priority orders to be issued by the Wisconsin fuel administration.

No cargoes have been received by Lake thus far in August. July's cargo receipts aggregate 167,799 tons of soft coal, making the season's receipts thus

far 774,060 tons. About 700 tons of hard coal screenings represent the total receipts of anthracite thus far by Lake. Last year 503,158 tons of anthracite, and 1,515,293 tons of soft coal had been received up to August 1.

Following is the schedule of soft coal prices at retail put into effect Aug. 1; Pitts., Hock. & Yough., \$7.25@ \$10.25; West Virginia, \$7.50@ \$8.50; Pocahontas, \$7.25@ \$11.75; Smithing, \$11.25; Kanawha gas, \$8; Illinois and Indiana, \$7@ \$8.50; Coke, large sizes, \$14, pea and nut, \$10.

#### MINNEAPOLIS

Despite gloomy reports from all sources, this region persists in believing a relief from its fuel shortage is about to appear. It is difficult to imagine how enough hard coal can reach here to satisfy the demand, but bituminous prospects, coal men think, are better.

Just now threshing is beginning to suffer for want of soft coal, however. A 20 per cent decrease in freight rates on wood is expected to help move that fuel. Prices are starting to fluctuate and may continue to do so all winter, for each shipment may be in a class by itself as to cost of handling and other factors. The Lake situation may be remedied through the efforts of the newly-appointed members of the Lake branch of the Federal fuel committee.

## New England

### Buyers "Wait and See" Before Entering Spot Market

**Smokeless Agencies Wary of New Business, Pending Federal Advice—Spot Market Offers Little Tonnage, But Rail Conditions Improve.**

THE market here has shown no material change since a week ago. Political gestures have had the effect of postponing buying and there is a general inclination to "wait and see," before negotiating purchases. A few houses are dealing actively in British coal, especially for distribution Inland, but there is hardly enough pressure yet to force any very comprehensive business.

What coal is available at Hampton Roads is being applied almost exclusively on contracts and because the aggregate spot tonnage changing hands at the piers is relatively small there is little data on hand to gage current quotations. The smokeless agencies have apparently concluded to confine themselves exclusively to old sales, pending some clearer direction than has yet emanated from Washington. Meanwhile the railroad labor situation is much clarified.

Improvements are reported on the three roads terminating at Hampton Roads. Certainly if corresponding gains

can be made next week on the N. & W. and C. & O. there will be enough increased flow of coal to strike a different sort of balance with respect to New England's supply. It will then be interesting to see whether representative operators will take a leaf out of the book opened by the railroad managers or whether they will submit to distribution by novices regardless of their contract obligations. The far-sighted members of the trade are hoping that developments during the month will remove all possible excuse for the wasteful paraphernalia which some are so eager to erect. The lessons of 1918 and 1920 are soon forgotten.

Taking into account the inroads by oil, the textile strike, and reduced traffic generally, present reserves are larger than would justify hysteria, although of course, much will depend upon non-union output the next six weeks. No industry here has the fat margin to work on that was typical in 1918 and there will now be a disposition to "stop, look, and listen" before entering into blind obligations to accept any kind of coal on any old price. The trade, too, will be less likely to underwrite extravagant distribution than was the case during the war period.

Householders who customarily use anthracite will not take kindly to bituminous as a substitute. If one reasonably uniform grade could be assured them, there might be some possible hope of replacing temporarily a certain tonnage, but without doubt they are to be told "coal is coal" and an already deep-seated prejudice against the industry will be immeasurably increased. To the dealer, whether wholesale or retailer, it looks like a joyous winter!

## Cincinnati Gateway

### Present Emergency Reveals Queer Angles of Coal Trade

**Uncertainty in Regard to Priorities—  
Ruling Without Enforcement Ma-  
chinery Called Fallacious—New  
Dodge Evades Hoover Prices—  
Smokeless District Holds to Hoover  
Level.**

**B**USINESS in coal is full of all sorts of queer corners, and, with its pivotal position, the Cincinnati gateway has developed a host of them. At this writing it is difficult to say whether priorities are on or off. The fallacy of creating a ruling without the machinery to back it up is glaringly shown here. Right now there is a large seepage through of cars accepted by agents in the mining districts on billing without any strings attached to them. With these coming through devoid of permits they have given the jobbers and wholesalers something to play with—something that is marketable above the Hoover prices.

This is especially true of L. & N. shipments. The smokeless districts, on the other hand, were holding to the Hoover prices as the basis of trade.

#### CINCINNATI

Billing and station agents on the C. & O. are held to strict accountability for the permits that are issued so that there are few cars that can be snatched out of the priority pot there. The N. & W., too, have seen to it that their men have been informed of the necessity of watching priority orders, yet here and there a few cars slip through. On the L. & N., however, quite a large number of cars have found their way to the hands of the wholesalers and in consequence these have been going to industries and buyers far down on the preferred list, providing that they will pay the price.

Like all other dealers in surreptitious quantities there is a wide divergence in the price of this coal. The first of the month and succeeding days saw the range of \$6.50@\$.8, quality or preparation cutting no figure. It would appear that those with the low price desired to move what they had before they got their fingers burned.

Locally there has been another boost at retail. Most of the concerns are asking \$8.50 for Pocahontas lump, \$7.50 for mine run, \$7.50 for bituminous lump and \$6@\$.65 for slack. This advance was made because the slower deliveries on contract necessitated getting coal in the open market. A move is being made to get a district order to hold up deliveries of retail coal to consumers made upon the lower basis of spring and summer.

### HIGH-VOLATILE FIELDS

#### KANAWHA

With the C. & O. concentrating upon the movement of coal from the Kanawha field, conditions began to improve about the beginning of August, even at a time when production in other and adjoining fields was greatly curtailed as the result of a car shortage. Government agencies were beginning to function and prices were steadier.

#### LOGAN AND THACKER

The accumulation of 3,500 cars in the Logan field is being gradually reduced. At the outset of August there was a slight improvement in the car supply and production began to move upward again. There has been no effort to profit unduly by the emergency and soaring prices have been materially reduced as a result of the warning as to car supply where high prices are extorted.

Until the end of July Kenova-Thacker mines were not producing more than half the output of June owing to the inability of the mines to secure cars.

The irregular supply made it impossible to work more than half time. With embargoes against the movement of all freight except coal, livestock and foodstuffs, operators anticipate a better movement. Committees are functioning in the distribution of coal and prices are approaching normal once again.

#### NORTHEASTERN KENTUCKY

After experiencing a shortage of cars so serious as to reduce the output to 55,000 tons per week as against a potential capacity of 288,000 tons, the field is beginning to recover, although production is still hampered by the lack of an adequate supply.

### LOW-VOLATILE FIELDS

#### NEW RIVER AND THE GULF

Although more New River mines are operating, yet production has been greatly curtailed as a result of the inability to secure equipment promptly. New River companies are lending their full co-operation to the government in the effort to get fuel to the market promptly and to take care of needy consumers, most of the tonnage shipped moving at the Hoover maximum. There was a decided slump in prices on all grades during the closing week of July or just as soon as the car supply became dependent upon an observance of fair prices.

Production in the Gulf, notwithstanding a shortage of cars entailing a heavy production loss, remained at about 150,000 tons per week throughout July, and as August was ushered in there was a slight improvement in the transportation situation which had the effect of enabling mines to increase their output.

#### POCAHONTAS AND TUG RIVER

Serious inroads on the Pocahontas output were experienced during the closing days of July as a result of the poor car supply, production being reduced from about 450,000 tons per week to less than 250,000 tons per week,

with car shortage losses aggregating almost 400,000 tons. Western connections of the N. & W. were slow in getting empties back to that line. There appeared to be a slight change for the better by the beginning of August, however. There is a probability that the Pennsylvania, under the new fuel order, will secure the bulk of its fuel supply from the N. & W. territory, including the Pocahontas field.

As July came to an end the output of the Tug River field was not over 50,000 tons a week or just about half of the total produced in recent months. Mines could produce no more owing to a lack of cars and to an accumulation of loads. Although the demand was just as urgent as it had been, yet prices were settling back to the Hoover maximum after a brief period of soaring.

## South

### BIRMINGHAM

Demand continues strong although the situation has eased some from the tenseness of a week ago. Orders are still to be had far in excess of the supply, and so far government control of distribution has not functioned to such an extent as to interfere materially with the normal movement. A large tonnage is moving into the West.

The demand for spot domestic is also good, the supply being somewhat short of the needs at this time. Practically all of the output of the Cahaba mines producing domestic sizes has been contracted for and the better grades are scarce.

Operators have generally agreed to abide by the Hoover price schedule during the present emergency and observe priority orders placed at their mines, it being the intention of the district committee to so distribute preferential business as to interfere as little as possible with regular customers.

Prices on the various grades under the fair-price schedule will be about as follows, f.o.b. mines:

	Mine Run	Prepared
Big Seam .....	\$2.20	\$2.50
Carbon Hill .....	2.60	2.80
Cahaba .....	3.20	3.50
Black Creek .....	3.20	3.50
Pratt .....	2.60	2.80
Corona .....	2.60	2.80

Higher prices can easily be obtained for all grades of coal than the schedule above and of course a minority is taking advantage of them, as is always the case. Contract prices on domestic coal for August range \$2.45@\$.45.

Production is being interfered with very materially by car shortage. The railroads otherwise are furnishing very much better service, as freight is moving more promptly and regularly as a whole.

### VIRGINIA

Steady decreases in production marked the course of events during the last part of July, with a prospect, however, that there would be an improvement in transportation conditions. Mines served by the C. C. & O. are producing at a heavier rate than others in the field or at about 71 per cent. Prices began to break as soon as it became apparent that cars would not be furnished to operators charging more than a fair price.



## News Items From Field and Trade

### ALABAMA

David Roberts, Jr., trustee for the Montevallo Mining Co., has moved the general offices of this company from 1903 American Trust Bldg., Birmingham to Aldrich. The sales department will in future be located at Aldrich, also.

### ARKANSAS

A decree of foreclosure and sale against the property of the **Arkansas Coal & Land Co.**, was made by the Federal Court, Ft. Smith, recently. All the property of the company in Johnson and Logan counties is to be sold at public auction on Aug. 28, at Clarksville. The property to be sold includes the \$300,000 judgment held by the **Pennsylvania Mining Co.** against the **United Mine Workers**, as an outgrowth of the labor troubles at Jamestown, Ark. The Pennsylvania company's property was later transferred to the **Fernwood Mining Co.**, and the two mines, among the largest in that section of Johnson County, are known as Fernwood Nos. 1 and 2. The decree placed a minimum sale price on the property of \$200,000. The sale was decreed to be subject to the approval of the Federal Court.

### CONNECTICUT

Governor Everett J. Lake has appointed a committee to control the fuel distribution in the state. It consists of, John M. Wadhams, chairman, Torrington; E. Kent Hubbard, president of the Connecticut Manufacturers' Association; Ralph D. Bugbee, of Putnam; State Treasurer G. Harold Gilpatrick; State Comptroller, Harvey P. Bissell; and Tax Commissioner, William H. Blodgett. It will be the duty of the newly appointed commission to see that the industries of the state will not suffer; and also have charge of domestic fuel.

**G. E. Willis & Son, Inc.**, Manchester, is planning to establish a new coal yard on the Volvoline Oil property in that city. Twelve coal bins of 200 tons capacity each will be provided and the latest coal handling equipment will be installed.

The **Central Coal Co.**, New London, has awarded the contract for the erection of a \$20,000 coal shed building.

### ILLINOIS

**John M. Poepperling** of the **Jewel Coal & Mining Co.**, St. Louis, was in southern Illinois recently. While in the district he spent a few days at Du Quoin where the company has two mines located.

**T. C. Keller**, head of the **Indiana & Illinois Coal Co.**, Chicago, was on a business trip in the southern part of the state recently.

Reports have been confirmed of the purchase of a strip of ground near Mt. Vernon by the **Wabash, Chester & Western R.R.** The company will build a switching yard which will be used exclusively for coal. The road recently was taken over by the interests of the **Southern Gem Coal Co.**, of Chicago, which also has a number of mines located along its route. The company has had too little storage room for loads during the past three winters. The yards are to remedy this.

### INDIANA

Coal production will be the principal business of the **Dugger Martin Coal Co.**, recently organized at Sullivan, with a capital stock of \$250,000, although the company reserves the right to engage in any sort of mining business. The organizers of the company are O. H. Martin, Oliver Steele and M. E. Dugger.

The **White & Wright Coal Mining Co.** has been organized at Clinton, for the purpose of doing a mining, jobbing and retail coal business. The organizers of the company are James A. Wright, Charles J. White and O. Ray Cook.

**Morgan E. Greene**, **F. M. Goble**, **Russell Shumard**, **Thomas Goble** and **Ray E. Greene** are the organizers of what is to be known as the **Greene-Goble Coal Co.**, re-

cently incorporated at Shelburn. The company will do a general operating business.

**Phelps F. Darby**, an attorney of Evansville, has been named receiver of the **Possum Ridge Coal Co.**, which owns a coal mine in Warrick County, about two miles west of Boonville. The receivership grows out of the failure of **Fricke & Blair Co.**, which has been operating the Possum Ridge mine for several years.

**William Schrolucke**, receiver of the **Metropolitan Fuel Co.**, of Indianapolis, will sell the personal property and assets of the company at a receiver's sale Sept. 7. The company was forced into the hands of a receiver when suit was brought against it by one of the big Indianapolis insurance agencies.

### KENTUCKY

The **Boone Jellico Coal Co.**, of Pineville, has been formed by officers connected with the **Boone Coal Sales Co.**, Cincinnati, and several residents of the Pineville district. The officers of the company are **M. F. McDermott**, president; **John Emslie**, vice-president; **Wheeler Boone**, secretary and treasurer. Capital \$50,000.

While state troops protected some of the involved operations, several mines in Bell County, with a total potential production of about 1,000,000 tons a year have merged into the **Log Mountain Consolidated Coal Co.** The properties taken over are the **Hignite Coal Co.**, **Yellow Creek Coal Co.**, **Mingo Coal & Coke Co.**, **Bennett's Fork Coal Mining Co.** and **Log Mountain Coal Co.** The concern is capitalized at \$2,000,000.

The **Miners-Elkhorn Coal Co.**, **F. M. Preston** Paintsville, general manager, has recently opened up two new mines that will develop a large acreage near Riceville on Big Sandy & Kentucky River R. R.

The **Elkhorn Gas Coal Co.**, operating near Martin, is making extensive preparations to open up three new mines. A mile of standard gauge railroad has been built up Bucks Branch and a large twin tippie is being completed.

### MARYLAND

Governor Ritchie has announced the membership of the **Maryland Coal Distribution Committee**. Those appointed are **Frederick W. Wood**, president of the Board of Trade, A. Asbury Davis, president of the Merchants' and Manufacturers' Association, **Ferdinand A. Meyer**, former United States Fuel Administrator for Maryland, **James B. Biays**, of Black Sheridan and Wilson, **Howard Adams**, president of the Maryland Coal Jobbers' Association, **Hugh C. Hill**, president of the Baltimore Coal Exchange, **William Milnes Maloy**, chairman of the Public Service Commission.

### MISSOURI

**Henry Gibson**, engineer, has come to Carrollton in the interest of the **Big Four Mining Co.**, with a view of developing the local coal field. It is the plan of the company to open three mines here and push operations. The leases secured are on the royalty basis and will net the owners of the land from \$200 to \$250 an acre.

The **Callaway County Coal Co.**, which operates a coal mine near Carrington, has filed a petition in the Audrain County Circuit Court, asking for a dissolution of the company. The petition states that the company can no longer be profitably operated.

**Robert O. Eddings** has filed suit against the **Kay County Coal Co.** for \$40,000 damages for injuries alleged to have been received in Mine 50, Feb. 25, 1922. The plaintiff charges that while acting as cager the cage suddenly began to ascend without a warning and that he was caught between the cage and the wall of the shaft. He alleges that he was permanently injured and will be disabled from work in the future.

Members of the **Clifton Hill Banking Co.**, with parties from Bevier and Macon, are interested in the proposed development of several thousand acres of coal rights in the western part of the county.

### NEW YORK

The **Nashwalk Pulp & Paper Co.**, with headquarters in New York City, has purchased coal mining areas in New Brunswick. The coal property was recently inspected by officials of the company and it is likely that in the course of the next few weeks activities will be resumed. It is believed that the property will show a fine grade of soft coal. The coal property of the company is located near the pulp land holdings of the concern. **Hugh Chisholm** of Portland, Me., is the president of the company and **E. N. Jones** is general manager.

### OHIO

The **Snake Hollow Coal Co.** and the **Powell Creek Coal Co.**, allied interests, formerly with head offices at Nelsonville, Ohio, have opened a Columbus office in the Ferris Building, with **Charles Preston** in charge. The two companies have an output of 1,000 tons daily when working.

As a means of properly rationing coal to utilities and industries in southern Ohio, the Cincinnati Chamber of Commerce has asked the former members of the Garfield Fuel Administration to act. This is made up of **W. F. Wiley**, **A. Clifford Shinkle**, **W. K. LeBlond**, **C. L. Harrison**, **Walter Schmidt** and **W. C. Culkins**.

**George Poor**, appointed by Governor Harry Davis, as fuel dictator for Ohio, is a member of the State Public Utilities Commission. He was a former mayor of Glendale. One of his first moves was to place the railway movement of coal through Cincinnati in the hands of **F. M. Renshaw**, in charge of the traffic bureau of that Chamber of Commerce and who had charge under the Garfield administration.

Steps have been taken to raise the receivership of the **Allied Power Industries**, a \$10,000,000 trust estate which was forced into the hands of a receiver about six months ago. The concern is a consolidation of a number of properties, among which was a coal producing concern in Tuscarawas County. It also controls the patents for Ohio on the "atomized coal" and artificial gas.

### PENNSYLVANIA

The fifth annual meeting of **Cosgrove & Company** was held at the Fort Stanwix Hotel, Johnstown, late in July. Approximately 100 department heads and managers were present when the conference began. Mayor **Joseph Cauffiel**, of Johnstown, delivered the address of welcome to the convention on behalf of the city, while **Enoch Carver, Jr.**, welcomed the convention for the company.

**Fayette** and **Greene** county coal producers, in compliance to the request of Secretary of Commerce **Hoover**, held a special meeting at Uniontown, and effected an organization to be known as the **Fayette & Greene County Coal Producers' Association**, as well as adopting without restriction Mr. Hoover's tentative plan for coping with the present coal shortage emergency. A committee of nine, which is to co-operate with Washington, will be composed of **W. C. Hood**, of the **H. C. Frick Co.**, **John Sincok**, of **Rainey**, **M. B. Cooper**, of **Hillman**, **C. F. Lingle**, of **Greene County**, **George Whyel**, **W. W. Parshall**, **Harry McDonald**, of **Dawson**, **John B. Moore** and **W. D. McGinnis**, of **Connellsville**. This committee may later be enlarged.

The State will not await the decision of the Supreme Court of the United States in the constitutionality of the anthracite tax in dealing with appeals by anthracite producers from the settlements of coal tax by the Auditor General, but will prosecute them promptly in the Dauphin County Court, Harrisburg. The appeals filed for the tax computed to be due by **Samuel S. Lewis**, Auditor General, will be listed for disposal in court just as are other appeals from State taxes. **George E. Alter**, Attorney General, has been notified of appeals taken from the tax by numerous anthracite companies which have been required to give adequate bond for the tax and the costs and the cases will proceed in the fall. The Attorney General will appear at Washington when the Supreme Court reconvenes to ask that the test case be advanced because of the importance to the next Legislature which must have definite knowledge of the sources of revenue.

**Frank Stark**, shaft sinking contractor, of Greensburg, has taken a contract and started work sinking the shafts for the large new operation of the **Jamison Coal & Coke Co.** of Greensburg, on the large tract of land recently leased from the Thaw estate of Pittsburgh, near Uniontown.

## UTAH

Michael Schoenberger has received a permit for coal prospecting four miles from Fillmore, Millard County. Coal has been found there and efforts are to be made to see if it exists in commercial quantities and quality.

The Clark Co-operative Coal Co., Thompsons, has been organized to work the mines in Thompsons Canyon, owned by U. H. Clark.

## WEST VIRGINIA

Increased valuation of coal property in West Virginia has led to protest on the part of coal land owners in some sections, the Monongahela Coal Association, as an instance having announced that it would enter a strong protest against the value placed on many properties. There has been a general reassessment of property throughout the state, coal land included, this year, at the direction of the State Tax Commissioner, although the same law has been on the statute books since 1908. The State Tax Commissioner, however, insists that coal be assessed at its true and actual value and in accordance with such instructions there has been a general increase in the valuation placed upon smokeless and all other coal.

The Washington-Elkins Coal Co., Inc., has been formed at Elkins, with capital \$300,000; incorporators, C. A. Parvin, E. L. Maxwell, W. B. Maxwell, J. H. Maxwell and Alverna Gloeckner, all of Elkins.

George L. Rogers of the Mon-Scott Fuel Co., with headquarters at Morgantown, was inspecting the property of the Bear Mountain Gas Coal Co., near Flemington recently.

Supplementing recent news to the effect that Paul Hardy, a prominent coal operator of the Guyan and Coal River territory had organized the Hardy Coal Co. for the purpose of developing large acreages of coal land on the Four Pole of Tug River in McDowell County and was preparing to begin development work without delay, a contract for building five miles of railroad to connect the Hardy company's property with the main line of the N. & W. has been awarded to Harry Waugh, with headquarters at Bluefield.

The Hood Coal Co. has resumed operations at its mine near West Shinnston. This mine has been idle since November, 1920. It is owned by W. C. Wyatt and Frank A. Burnett.

## Traffic News

The complaint of the Southern Ohio Coal Exchange and many individual coal shippers against the revised coal freight rates from the Ohio districts to Toledo and other Lake ports following the reduction of 10 per cent by the I. C. C. was heard before the Ohio Utilities Commission late in July. The complaint stated that the full 10 per cent was not given to Ohio shippers in the effort of the carriers to preserve the differentials of pre-war times. W. D. McKinney, secretary of the Southern Ohio Coal Exchange was the principal witness for the complainants. The rate from the Nelsonville assembling point to Toledo was formerly \$2.10 and has been reduced to \$1.99 which is about 6 per cent. The rate from the inner crescent of West Virginia, formerly \$2.66, was reduced to \$2.39, while that of the outer crescent of West Virginia was reduced from \$2.86 to \$2.59. J. C. Vining was the principal witness for the railroads. He claimed that the present rate arrangement had the sanction of the I. C. C.

Rates on coal mined in western Kentucky and moving to northern Georgia consuming points and to Savannah for export have been held by the I. C. C. to be too high in comparison with rates on coal mined in other parts of the state. Railroads have been ordered to fix charges on coal over the haul named at not more than 50c. a ton above the rates which they maintain at the same destinations for coal mined in the Jellico-Middlesboro territory.

The complaint of the Gulf Coal Co. has been assigned for hearing by the I. C. C. at Washington, Sept. 22.

The complaint of the Colony Coal Co. will be heard at Denver, Oct. 9.

Hearing in the complaint of the Tulsa Fuel Co., assigned for New York Sept. 12, has been canceled.

Plans have been formulated for improvements at the plants of the E. E. White Coal Co., in the Winding Gulf Field to cost between \$200,000 and \$300,000. The company will provide additional miners' houses at Glen White and Stotesbury to cost in the neighborhood of \$75,000. The company has also placed orders for many additional mine cars and will install additional cutting machines in its mines. Although the trackage facilities at both Glen White and Stotesbury have been enlarged, more trackage is to be provided all with a view to securing a possible output of 2,500 tons a day. Extending the scope of its operations the company is preparing to mine coal in the No. 3 vein at Stotesbury.

The Paragon Coal & Supply Co. has been organized by coal people of Cabell County, having a capitalization of \$50,000. Headquarters of this company are to be at Huntington. Closely identified with the new company are W. E. Deegans, one of the leading operators of southern West Virginia; A. W. Fitzwater, J. M. Turner, E. A. Dean, J. F. Vass, Huntington.

C. H. Mead, president of the Low Volatile Consolidated Coal Co., with mines at Rock Lick, Bailey Wood and Ragland, and president of the C. H. Mead Coal Co., with mines at East Gulf, and general manager of the Interstate Coal & Dock Co., has taken a vacation and has gone to his Florida home.

## BRITISH COLUMBIA

The miners' strike has had practically no influence on the Vancouver Island mines, as the non-union operations in Idaho and Washington were able to take care of the demands of the Pacific Coast. The railway shopmen's strike, however, has now caused a sharp demand for Vancouver Island coal, and the mines, which for the past year have been worked on only part time, are nearly all now working full time as orders are pouring in from all down the coast.

## ONTARIO

The outcome of a conference at Ottawa is that the dealers have undertaken to purchase Welsh and Canadian coal to protect the city during the coming winter. A special committee was formed and the indications are that Ottawa will have a good substitute fuel supply until such time as anthracite comes in from the United States.

Because of the application of unreasonable rates on anthracite from the Carbon-dale, Pa., district to South Utica, N. Y., for delivery on the West Shore Railroad, the I. C. C. has directed the Director General of Railroads to refund \$17,973 to Frank A. Coakley and other shippers.

The Hocking Valley has been ordered to refund \$724 to the P. Koenig Coal Co., for illegal rates on coal from Ohio, Kentucky, West Virginia and Pennsylvania to Detroit.

## Coming Meetings

New York State Coal Merchants' Association will hold its annual meeting at Richfield Springs, N. Y., Sept. 7-9. Executive secretary, G. W. F. Woodside, Arkay Bldg., Albany, N. Y.

Coal and Industrial Exposition under the auspices of the Huntington Chamber of Commerce will be held Sept. 18-23 in the Chamber of Commerce Bldg., Huntington, W. Va. The West Virginia-Kentucky Association of Mine, Mechanical and Electrical Engineers will again hold its annual meeting in the same building during the exposition.

National Exposition of Chemical Industries will hold its eighth national exposition at the Grand Central Palace, New York City, Sept. 11-16. Manager, Charles F. Roth, Grand Central Palace, New York City.

American Mining Congress. Twenty-fifth annual convention and exposition of mines and mine equipment will be held at Public Hall, Cleveland, Ohio, Oct. 9-14. Executive offices, the Hollenden Hotel; E. C. Porter, convention manager.

National Exposition of Power and Mechanical Engineering will be held at the Grand Central Palace, New York City, Dec. 7-13. Manager, Charles F. Roth, Grand Central Palace, New York City.

The Dufferin Coal Mining Co., Ltd., has been organized with head offices in Toronto, to engage in coal mining and to deal in coal generally. The company is capitalized at \$500,000 and the provisional directors are G. H. Sedgewick, James Aitchison, J. W. Pickup, C. C. Calvin and A. E. Huggill, of Toronto.

Sir Archibald Mitchelson, who is connected with a number of collieries in Wales, Yorkshire and Cumberland, has arrived in Toronto on a vacation. Sir Archibald is president of the Davidson Porcupine Mining Co. He states that the United States coal strike is proving a big boon to the British collieries.

Colonel K. R. Marshall, manager of the Standard Fuel Co., Toronto, has returned from a trip through the various coal fields of the United States, where he studied the strike situation and where he says he received assurance that Canadian needs would be looked after immediately work was resumed.

## WASHINGTON, D. C.

Senator Cummins of Iowa, has presented to the Senate a petition of W. G. Block Co., of Davenport, urging the prompt shipment of coal for Iowa industries.

The District Commissioners have detailed Walter C. Allen, secretary of the Public Utilities Commission, to make an investigation of the coal situation in Washington, in connection with the plans of the city government to distribute coal under the government priority system.

The constitutionality of the Lever fuel control law and regulations of the Fuel Administration during the war, restricting coal jobbers' profits to 15c. per ton, are attacked in appeals filed in the Supreme Court by the Matthew Addy Co., and Benjamin N. Ford, its vice-president, who were each fined \$1,000 and costs for charging 25c. a ton profit on bituminous coal in Cincinnati during September, October and November, 1917. The case was tried in the Western Division of the Southern District of Ohio, and its decision against the company and its vice-president was affirmed by the Circuit Court of Appeals for the Sixth Circuit. In asking the Supreme Court to reverse the decisions of the lower courts the company argues that the act substituted executive for judicial processes and that it delegated to the President powers not conferred upon him by the Constitution.

American Institute of Mining and Metallurgical Engineers will hold its fall meeting during the week of Sept. 25 at San Francisco, Cal. It is proposed to arrange for a party to leave New York on Sept. 10, stopping at different cities en route. Secretary, F. F. Sharpless, Engineering Societies Building, New York City.

American Chemical Society's annual fall meeting will be held Sept. 4-9 at Pittsburgh, Pa.; divisional meetings will be held at Carnegie Institute of Technology and general meetings at Carnegie Music Hall.

The Rocky Mountain Coal Mining Institute will hold its next meeting at Glenwood Springs, Col., Sept. 7-9. Secretary, F. W. Whiteside, Denver, Col.

National Safety Council. Eleventh annual Safety Congress at Detroit, Mich., Aug. 23 to Sept. 1. Executive secretary, W. H. Cameron, North Michigan Ave., Chicago, Ill.

## Obituary

Robert M. Wherrett, for 14 years Norfolk manager for the Berwind-White Coal Mining Co., died recently at his home at Ocean View. He was a native of Baltimore, is survived by his widow and one daughter, and was 41 years of age.

John E. Laing, of Du Bois, Pa., a mining engineer and mine owner, died suddenly of heart disease at the age of forty-eight at his home, late in July. He was born at Fallbrook, Tioga County, Pa., and after working in the mines was, at 21 years of age, made superintendent of the Clearfield Coal & Coke Co.'s La Jose mines, studying meantime mining engineering. After nine years as superintendent he became general field agent for the Northwestern Mining & Exchange Co., constructing the central electric power plant at Helen's Mills. In 1915 he came to Du Bois and entered the mining business as mine owner.